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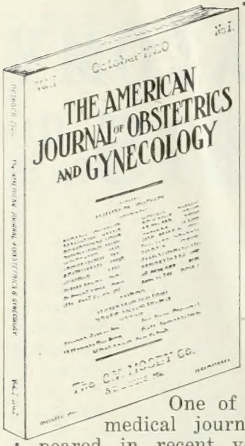

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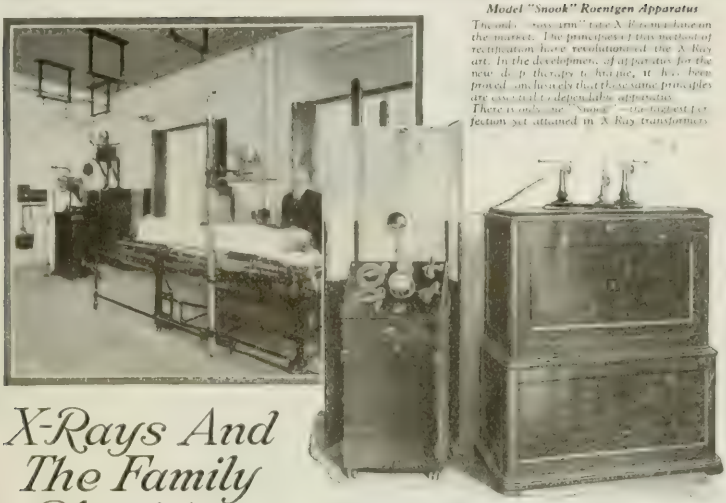

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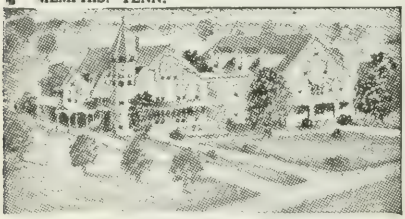

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THE ARISTOCRACY OF SERVICE*

BY JERE LAWRENCE CROOK,
A.M., M.D., F.A.C.S.,
Jackson, Tenn.

From the earliest records of human history we have learned that mankind has ever yielded homage to those among them who were regarded as representatives of the best in their civilization. This dominant class of the population owed its position to the fixed standard of value in the minds of the people, which standard it exemplified. Therefore it is not surprising that in the early dawn of history brute strength should have been the gauge by which the best or ruling class were selected.

As representatives of this ruling class intermarried, it was quite natural that their sons and daughters should inherit the strength and personality of their parents. Thus the aristocracy of blood came in normal succession. As the strongest man in the tribal clan was made king and given homage because of his strength and his kingship, so the family of this strong man enjoyed with him and through him royal birth and prerogatives.

The history of the world ever since is a record largely of allegiance and loyalty to the aristocracy of blood until the great American Declaration of Independence, July 4, 1776, gave birth to a new ideal of government — democracy—the rule of the people. The creation of the American nation shattered the traditions of centuries, during all of which time mankind had given homage and paid tribute to the aristocracy of blood. It took a revolution to change this standard for the new world and it has required the most stupendous, the most terrible war in the world's history to uproot from the hearts of the old world peoples this blind allegiance to royal blood.

Our own country waxed greater and more powerful as the years went by, selecting its rulers by a free and untrammelled electorate, in harmony with the noble purposes and provisions of its constitution. However, in time a new force began to wield its influence in the affairs of state and exercise dominion over the minds and hearts of the people. This was the era when money became a sinister influence in government and great trusts took hold of the economic life of the Nation. The aristocracy of wealth has succeeded the aristocracy of blood and its representatives thought themselves possessed of royal prerogatives and that to them the common people should yield homage and service.

At the time when wealth had about succeeded in establishing itself as the gauge by which man's worth and value to society should be judged, the World War burst forth, and as the great nations of the earth answered the call to arms, the whole civilized world was rocked to and fro in the awful struggle. Thrones tottered and fell, men were slain by the millions in battle, women and children, the old and the weak died in their homes, and it seemed that 1900 years of Christian teaching and influence were unavailing in the face of the hell-born holocaust.

Out of this awful struggle, this seething cauldron of war, has emerged a by-product destined to wield a tremendous influence in the world. This product is the new standard of measurement by which we gauge the value of an individual or a nation. One word, service, expresses the new ideal and the aristocracy of service

*Presidents Address, Southern Medical Association, Fifteenth Annual Meeting, Hot Springs, Ark., Nov. 14-17, 1921.

is the successor to all the former dominant classes in the hearts of the world's peoples.

The greatest exemplar of service in the annals of both sacred and profane history was Jesus, the Christ whose earthly ministry was an epic of unselfish devotion to the spiritual and physical needs of men as He went about doing good among the hills and valleys of Judea. His death on the cross as an atonement for the sins of the world was the climax to His ministry of service, and ever since that time the noblest aspirations and the loftiest ideals in the hearts of men have derived their inspiration from His life and teachings. When He said in John 15:13: "Greater love hath no man than this that a man will lay down his life for his friends," He expressed the ideal of service and sacrifice which has sent millions of men to death that others might live. Therefore it is most fitting that the soldier who goes forth in defense of his country to lay down his life, if need be, for his fellowmen should be universally regarded as the leading exponent of the ideal of service in the life of mankind. The splendid example which our soldiers have given us in war should inspire every man and woman everywhere to serve their fellows in times of peace. If all men would regard their vocations as opportunities for service and practice the golden rule in both business and social life, then, indeed, would the aristocracy of service become a practical reality.

This ideal of service has found splendid expression in the organization and progress of civic clubs, of which the Rotary Club is the most notable example. Beginning fifteen years ago as an idea in the heart of one man, it has now increased until it numbers more than one thousand clubs with a membership of close to 80,000, who are earnestly endeavoring in their daily lives to exemplify the spirit of Rotary's slogan, "Service Above Self." Extending its sphere of usefulness far beyond America, this organization is doing much to promote international good will.

For several years I have thought along the line of the greatest service we physicians may render to humanity, and in my presidential address before the Tennessee State Medical Association several years ago I said: "Human history contains no chronicle of the progress of mankind more interesting and more inspiring than the marvelous advance which our profession has made within the past half century. It has pressed forward eagerly in its fight for humanity, testing each new discovery in the crucible of experience, using every modern agency to make more exact diagnoses and to give more efficient treatment, marking its progress by the countless thousands whose lives have been saved and by the lengthening span of human life."

However, instead of looking backward, let us turn our faces to the future and inquire what more we may do to lengthen human life and make the world a better place to live in. I mean what the medical profession in a broader, higher sense should undertake to do for the world. The physician needs no incentive to use his utmost skill to heal the sick other than the call of humanity. The surgeon requires no admonition to be mindful of placing his patient's life in jeopardy—other than his own conscience. His peculiar and sacred relation confers on him an obligation which he fully realizes and rarely fails to discharge honorably. But there is, if possible, a broader mission for us in our relation to society in general, and that is to recognize and realize the obligation contained in the title which the world gives to us—to be indeed, as we are in name, doctors, teachers.

When we enter this broad field, the vista of possibilities for helpful service to humanity spreads out alluringly before us. Let us look about us and mount the rising tide of altruism which is reaching upward in many directions and take our just position as leaders in a movement to minister to the physical and moral health of the people. We are often termed guardians of the public health and have done much in the past to justify the term, both in preventing and curing disease, but in this broader field of service I can discern manifold opportunities not yet grasped for ministering to our fellow men.

The physician who is true to the best traditions of his profession must be a man of lofty ideals. Such a one does not choose medicine as a profession because of its promise of large financial rewards. He

realizes when he receives his diploma and subscribes to the Hippocratic oath that his life is to be a ministry of service and oft times a labor of love unrequited except for the consciousness of duty well performed, and the joy of bringing sunshine into lives darkened by suffering. Therefore the opportunity to serve and save humanity makes the greatest appeal to those who conscientiously choose medicine as a career. Life conservation, then, is our goal and must be our daily business.

The only tribunal before which we can be justly arraigned is the bar of mortuary statistics. That is where we are to be tried, and if we do not lengthen human life and lessen suffering and inculcate a better standard of living, and a higher standard of excellence than our predecessors, then we stand convicted before this tribunal. So I claim when we use our opportunities to teach; when we carry out the suggestion in the title of doctor which the public gives us, we will be accomplishing the greatest good for humanity and will thereby approach nearer to the ideals toward which we are striving.

This type of service, which I feel it is the special privilege and obligation of the medical profession to render to the world, has been splendidly performed in the educational campaigns which have been conducted for several years by the profession ably assisted by the press, pulpit and philanthropists the world over. Perhaps the most notable example is the campaign to teach the prevention and cure of tuberculosis, as an outgrowth of which has been the organization of county, state, district and national societies for the study and prevention of tuberculosis, which have by publicity in the press, by public lectures and by personal efforts accomplished a marvelous work of life conservation in this one field.

Scarcely less important and successful have been the teaching campaigns regarding the cause and prevention of typhoid fever, malaria and diphtheria, the mortality rate of these diseases having been amazingly reduced.

The American people are notoriously extravagant and wasteful, but the most serious and inexcusable waste is the waste of human life, the deaths from preventable diseases having reached over 600,000 annually. The call to service, therefore, along these lines is still loudly pealing. Is it not true, then, that our profession has a most marvelous opportunity to serve humanity by lending its efforts in every possible way to teaching the people how to reduce this appalling life waste?

The privilege of serving our fellowmen as physicians and surgeons in individual cases is purely a business relationship for which we receive compensation. Therefore, no credit attaches to us for rendering the service commensurate with the needs of the patient. It is only when we strive in a spirit of lofty altruism to teach the people how to prevent disease upon which our income depends and how to reduce unnecessary mortality and how to diminish unnecessary economic waste of time and financial burdens that we approach the aristocracy of service.

In the daily routine of work when I am confronted with patients whose cases are hopeless simply because of delay in presenting themselves for treatment, and when I know that proper instruction from a source in which they have confidence would have caused them to seek aid in time, I feel the burden of responsibility pressing down upon me.

From the standpoint of the surgeon I am constrained to speak of two diseases which are surgical primarily and preeminently, and can be cured only by surgery, the percentage of cures depending almost entirely upon early operation. I refer to cancer and appendicitis. As your president it was my privilege to speak on "The Cancer Problem" before a large audience of Nashville people at the last district meeting of the College of Surgeons in that city. The College is devoting a large amount of thought and effort to its teaching campaign on the "Early Recognition and Prevention of Cancer," also the "National Association for the Prevention and Cure of Cancer" is directing its energies most successfully along the same lines. There has been much in the press within the last few months on this subject and the campaign will be pressed by both of these organizations. For that reason, therefore, and because of lack of time I shall not discuss the cancer problem at this time.

The other surgical disease, appendicitis, however, while it has been discussed and threshed out on the floor of practically every medical society for a number of years, and while surgeons are in harmony in reference to its treatment, yet there has been a sad lack of knowledge and information in the hands of the people regarding its dangers.

No doubt many members of the Surgical Section who were present at the Dallas meeting will recall the very interesting series of papers and discussions on appendicitis. The most impressive fact brought out at that time was the greatly increased mortality rate due to delayed operations and the prolonged disabilities resulting therefrom when recovery occurs. Every surgeon, especially those operating in the smaller cities, has had so many of these delayed, neglected cases brought to him as a last resort that he has doubtless wondered if it is possible to teach the people the dangers of delay. Not only does the desperate condition of the patient render the operation more difficult and hazardous, but even when the patient survives, his suffering is vastly aggravated, his convalescence greatly prolonged, his hospital expenses largely increased, and his loss of time indefinitely extended. We therefore have the best of reasons for using our utmost efforts to bring this important subject before the people.

It was with the idea and purpose of preventing these needless deaths and disabilities that I offered a resolution at the close of the discussion that we devote a session of the Atlanta meeting to the task of teaching the general practitioner and the public the danger of neglected appendicitis, and the vast importance of an early diagnosis and prompt operation.

Following the Dallas meeting I was invited by the Secretary to present a paper at the Atlanta meeting on "Neglected Appendicitis," and I construed the invitation as affording me an opportunity for elaborating somewhat on the idea embraced in my resolution; however, my paper, "Neglected Appendicitis," was read before the Surgical Section, all of whose members were in hearty accord with the essayist, and no opportunity was given for the subject to be discussed in open forum in a joint session with the other sections or at any session where the public had been invited. Again at New Orleans during the A. M. A. session, April, 1920, at a meeting of the Councilors and section officers I suggested that the subject of appendicitis be discussed at a joint public session in Louisville in order that the knowledge possessed by the surgeons regarding this disease should be disseminated among those who were not fully conversant with it and whose opportunities had not given them the chance to know its dangers and its cure; however, my suggestions were not acted upon and this is the first opportunity which I have had to carry out the ideas which have been in my mind for the past six years; namely, of placing special emphasis on appendicitis at a joint public session of the entire membership. I firmly believe that by presenting this subject at this time I will render to humanity the best service of which I am capable, for I shall be using the high office which you, my confreres, have given me as an opportunity to spread the knowledge of this disease to the people who are so sadly in need of information regarding it.

The lamented Dr. Murphy in his "Clinics" on April 7, 1915, spoke so clearly, so forcibly, and so logically on this subject that I shall quote him at some length. It is almost like a voice from the beyond, as the words were taken down exactly as he spoke them and published in the June, 1915, edition of his "Clinics":

"Just recently a critic took a Chicago surgeon to task in the columns of a medical journal because the latter had published a colored picture of a gangrenous appendix in connection with a practical talk on its proper treatment. The critic intimated that appendicitis was ancient history. It is ancient history: but does that statement mean that all practitioners are masters of the subject, or that the disease is efficiently handled at the present time?

"In looking up recently for the 'Year-Book of Surgery' the hospital statistics on the results of operations for appendicitis, what mortality rate do you suppose I found? . . . The average hospital mortality rate is just a little over ten per cent! This includes appendicitis cases of all

classes brought to the hospital for operative treatment.

"Is it time to stop talking about appendicitis? No! It is just the time to *begin* talking about appendicitis, and talking most seriously and emphatically about it. When you know that in our best hospitals better than 98 per cent of all the *acute* appendicitis cases, including those with abscess and peritonitis are saved, and when you know that scarcely one out of a hundred cases of acute appendicitis cases operated upon during the first twenty-four hours of the attack is lost, think what the results must be in the other hospitals to make the general average so appalling! There is no palliative excuse for a mortality rate of ten per cent in appendicitis. The rate is simply shocking. These patients did not die because of the operation —do not misunderstand me—they died in spite of it. They died in the hospital under a surgeon's management, but they died not so much because of any fault in technic as because of the fact that they did not reach the hospital in time for successful operation. Procrastination was the cause of death—the almost criminal cause. The initial symptoms of appendicitis are clean-cut and almost unmistakable. The later symptoms are equivocal and not to be relied upon. The mode of onset of an attack of appendicitis is no clue to its probable course or complications. We can never tell in a given case what the next day may bring. Therefore, operate today! By operation we take the course of the disease into our own hands. By not operating we leave the case in the hands of a blind and often terribly cruel fate."

Since these words were spoken by Dr. Murphy there has been some slight diminution in the mortality rate; however, the Prudential Life Insurance Company in its latest statistics on this disease shows a total of ten thousand and twenty-nine deaths in 1919 in a population of eighty-five million which includes the U. S. registration area. In studying these statistics from the time Dr. Murphy made his statement in 1915 I find that the rate per hundred thousand increased in 1916, was stationary in 1917 with a very slight decrease in 1918 and 1919, so that his words if spoken today would have the same force that they had when uttered by him.

The family physician must bear this fearful responsibility for delay, except when the patient refuses operation after the case has been fairly placed before him. The family physician, if he be thoroughly imbued with the gravity of the situation, and thoroughly conversant with the symptoms of the disease, can, in almost every instance, influence the patient in favor of an early operation by a competent surgeon. It is no answer to this argument to state that a competent surgeon can save nearly all of his cases regardless of the time of operation, duration of the disease, or condition of the patient. Many men go through battle without being wounded, but that does not lessen the danger of the individual soldier. How can a conscientious physician impose upon his patient the tremendously increased risk of delayed operation when he realizes that the hazard to the patient is ten times as great? This statement presupposes that the family physician is in touch with a reputable surgeon who possesses a surgical conscience and technical skill.

But some may claim that many cases of appendicitis recover without operation. True, many cases apparently recover without operation, but experience proves that one attack always predisposes to other attacks, any one of which may prove fatal, for when an appendix has once been acutely diseased it never becomes a normal organ again. Forever afterward its owner carries on his abdomen a concealed bomb, liable to explode at the most inconvenient time with results most disastrous to himself. Therefore, should the patient refuse operation and be fortunate enough to survive the attack it becomes the manifest duty of the physician to insist upon an interval operation, because of its favorable mortality risk and furthermore because of the probability of other attacks whose tendency is to become more severe.

I am glad to say that the best informed physicians all over the country are in full sympathy with the efforts of the surgeons to reduce the mortality rate in this universal disease.

Dr. Norman Bridges, of Los Angeles, California, a well known internist, in an

address on this subject recently spoke as follows:

"Now we have the rule, which is widely accepted, that immediately after making a diagnosis of appendicitis the operation should be done if the surgeon is competent. But this rule is not so universally accepted as it ought to be.

"Of course, any number of people may recover from this disease without operation, but no human being can tell which patient is going to have a perforation and then abscess of general peritonitis. Nor is there any ground for the hope that means will be discovered whereby we can know without opening the abdomen the cases that, left to themselves, will, and those that will not, pass on to perforation and pus. These uncertainties will make it forever impossible to settle, without operation, this most vital question. I know that men have believed and argued that they are able to make the distinction, and learned medical societies have wrangled over this question almost interminably, but there is only one safe rule—that is, to operate promptly when a diagnosis is made. With a modern surgeon and the surgical facilities of a modern hospital there should be no difficulty, and by this course the danger to life will be minimized.

"We internists have almost as large a responsibility as the surgeons themselves. We ought not only to seek to have every appendicitis case operated upon early, but we ought, for numerous other conditions and mysteries in the abdomen, to insist upon exploratory laparotomy when it can be done by a surgeon of large experience."

These words harmonize with the statement of Dr. Murphy perfectly and were spoken in his clinic. They emphasize the importance of perfect agreement between the physician and the surgeon as to the nature and treatment of this disease in order that we may accomplish that which we all most desire—the salvation of more lives.

The physician is just as anxious as the surgeon to reduce mortality from every cause, and it is the duty of the surgeons to convince them that appendicitis is a surgical disease demanding prompt operation.

The mortality of 10 per cent is the mortality of delay, and it is more than nine times too high. Think of what this means when applied to the thousands of cases the world over! It means nine thousand unnecessary deaths in every one hundred thousand cases! Preventive medicine surely needs no greater incentive than this to push a campaign of education in the medical societies and before the people to teach them the necessity of prompt operation by competent surgeons, which is the only factor necessary to reduce the mortality rate from 10 per cent to less than 1 per cent.

By the time that people have learned this lesson we may expect to have the diagnosis and treatment so standardized in the minds of both internists and surgeons, that the so-called medical treatment of appendicitis will be but a doleful memory and neglected cases will be only those who refuse to heed the advice of their physicians and who have closed their eyes and ears to facts set forth by the campaign to teach the people the nature and treatment of this world-wide disease.

MEDICINE

INTERNAL DISEASES, PEDIATRICS, NEUROLOGY, DIAGNOSTIC METHODS, ETC.

THE PATIENT HIMSELF—THE NEED OF A BETTER STUDY OF HIS PERSONALITY AND OF THE VARIED MEANING OF SYMPTOMS*

By Wm. H. Witt, M.D.,
Nashville, Tenn.

I think it not inappropriate on such an occasion as this to touch upon some subject that enlists the interest of both the surgical and the non-surgical element of our profession, something so non-technical and of such broad application that it will serve to remind us that however much we differentiate our work and multiply the specialties, there are principles that pervade the whole structure of medicine and there are clinical methods demanded of all of us alike.

After all, our division of medicine into specialties is a relative, not an absolute affair. There is overlapping everywhere and this overlapping is a salutary thing. It broadens the common ground; it serves to accentuate the methods that we have in common and brings us into daily contact, even helpful conflict, with each other. There is, further, a wide range of patients, as there is a wide range of symptomatology, that will perforce tell their story to men of varied work—now to the internist, now to the surgeon or the neurologist or some other of more restricted field, and the nicest discrimination must be employed to decide upon the real meaning of symptoms presented and from what source therapeutic effort must issue.

These considerations have suggested to me a topic that is of paramount concern to the general surgeon, the internist, the neurologist and the general practitioner, but one by no means to be neglected by the various specialists. I mean the *patient himself*—including therein two ideas, first, that we are dealing not merely with a physical machine, not merely with organs, but also with a personality, an ego, a psyche, and that this personality, this complex result of conflicts of every kind which often extend over many years, is no small part of what we are called on to treat. And I include a second idea, that symptomatology, the language, so to speak, of disease is profoundly modified by the personality of the patient. Making due allowance for the multitude of instances in which no special study of the patient himself or his symptoms is demanded, there still remains a large number in which the reverse is true. If there is failure to study the patient himself, if his symptoms are not subjected to the most careful analysis for the possible bearing on them of any abnormality found, psychic or physical, therapeutic efforts are very likely to be misdirected.

A psychological study of a patient and a proper assessment of the value and meaning of his symptoms require time and they require a rather wide knowledge. And while most physicians both broaden and deepen their knowledge after their college and hospital years, I am afraid there are some among us who take rather a pride in the multitude of things we have forgotten. The interne leaves his hospital service with a great asset in his general knowledge and in his freedom from bias in the interpretation of symptoms. He is fortunate if he compels himself to hold on to this broad training and to make it effective in his work.

I have said that a proper study of a patient's personality and his reaction to his disease requires time, but it is time well spent, whether it requires one interview or many, and herein the family physician often has a great advantage of his consultant or the worker in a special field. What the latter has to work out by laborious inquiry or the insight that comes of experience, the former already knows by

*Oration on Medicine, Southern Medical Association, Fifteenth Annual Meeting, Hot Springs, Ark., Nov. 14-17, 1921.

virtue of his acquaintance with the patient and his family.

That there is professional neglect of a patient's personality and misinterpretation of the meaning of his symptoms is a matter of every day observation and I am inclined to believe is more common than formerly. And not a little of any failure in this regard may be laid to medical teaching. Most clinicians would rather stress the finding and the significance of murmurs and rales and tremors than to laboriously follow the neurasthenic through his long list of symptoms and then have nothing grossly pathological to show the student.

Time was when our diagnostic resources were limited compared with the many devices now at our command and one naturally took a more detailed history and made a more careful study of a patient's personality, these often then, as indeed now, leading more nearly to a diagnosis than did the physical examination.

We know how recently have come to our aid the roentgen ray outfit, the polygraph, the electrocardiograph, the calorimeter and many other physical methods of studying the organs of the body and their functions. Of how strikingly they have justified their introduction into practical medicine I make grateful acknowledgement. But that their employment has in many instances led to the neglect of a detailed history and to a consequent incomplete knowledge of the patient's mental make up, I am equally ready to assert. The patient whose cardiac symptoms have followed some great shock or one whose vomiting or other digestive tract symptom has been induced by some acute or long drawn out psychic strain, may be thoroughly polygraphed and x-rayed with a great show of being scientific, but these accommodating aids will not disclose the real source of the trouble, the psychic trauma. On the other hand the x-ray particularly may disclose certain variations from an assumed normal that have no bearing whatever on the matter in hand and no bearing on the patient's health, but easily furnish fields for ill advised therapeutics. A little knowledge was long ago credited with being a dangerous thing. It falls in better with our present purpose to say that incomplete knowledge may lead to foolish and probably dangerous treatment. And most of our modern methods, the old ones too, furnish us only too often with incomplete knowledge. The discovery of a high blood pressure has up to a rather recent date led about as often to a meddlesome effort to reduce it by drugs as it has to a search for and modification of the cause. It is probably not too much to say that if the stethoscope were discarded and the management of a heart case predicated on information gained by other modes of examination and the history, our cardiopaths would be better off. Poorly interpreted murmurs and misinterpreted rales have led only too often to foolish diagnoses and harmful treatment. We make much of equipment, and rightly so; for we cannot practice medicine without the tools of our proper field. But there are things that no amount of equipment will disclose to us. There are forces at work in this complex thing called man and the more complex sick man that are beyond detection by any instrument or any functional test. There arise in him symptoms that baffle all physical examination and yield their meaning only, if at all, after a more complete understanding of all the forces physical, social and religious that buffet him about from day to day and transform him from a self reliant rational creature into one full of fears, highly sensitive to all afferent stimuli and responding to them with exaggerated symptoms.

A woman of thirty came recently for some help for her many symptoms, so insistent at times as to almost invalid her. Born of a nervous mother who died while she was small, reared chiefly by an unsympathetic stepmother, married to a man of different religious belief out of which had grown some trying conditions, and now keeping house for a sadly mixed household, her whole life had been a conflict. Why shouldn't she have symptoms? She must have something to help her out of her troubles. Fortunately she had a pretty good grasp of the causes that operated to make her a sick woman. No one could have diagnosed intestinal indigestion or autointoxication. She happened not to have ovarian pain or abdominal tenderness, or deviated septum, or lacer-

ated cervix or anything that could invite surgery. If she had, how readily and how fatuously she might have sought relief by the surgical route.

Another seen almost the same day had long suffered at her periods and had to go to bed, was weak and nervous in many ways and unfortunately had had slightly enlarged and tender ovaries. What surgery did to her and had been doing for ten years in various fields was almost joyously detailed to me, so many times she had been snatched from the jaws of death. And yet there she was, plump and pretty, but unable to be on her feet more than a few hours each day. She had been studied as to tonsils and teeth and ovaries and appendix, but as a poor, weak, below par human being she had enlisted little consideration. This little had contained that self deceiving device so often resorted to: "let us get rid of this or that offending structure and then you will build up," an attitude that, in effect, capitalizes the safety of modern surgery and leads to many useless operations. Many tonsils have been sacrificed for the relief of the backache or the occipital headache of the psychasthenic, where one or two questions pointedly put would have revealed the source of the complaints and opened up a way for proper therapy. I carry no brief for the physician who treats everything that falls into his hands. He must of necessity fail on many occasions to give his patient the best that could be given. But such a practitioner is at least free of that bias that almost of necessity operates in the work of a specialist, who not only sees all patients who seek his advice through his peculiar glasses but allows those glasses to magnify the relation between his special field of work and the patient's symptoms.

A woman of twenty-two had been in bed three weeks because of great tenderness in the area of the left ovary. There was no tumor, no pelvic inflammation, no other pathology in spine, ureter or elsewhere. How easy to advise her to get rid of that ovary. How appealing such a condition is to a certain type of gynecologist and yet how certainly disastrous such a procedure would have been. A few questions brought out a nervous family history, a number of hysterical spells, ready fatigability and other stigmata that suggested what I hope will be a successful plan of management.

I think it is fair to say that patients are often operated on because of tenderness and pain. Most such have been done on the ovary and appendix but gall bladder and other surgery have been done with no more sanction than a troublesome tenderness. I wonder if we ever think to compare abdominal tenderness with similar phenomena elsewhere. It is exceedingly common to find points of great tenderness along the spine, while the fourth to sixth intercostal spaces in nervous women often exhibit both tenderness and pain. No surgeon is bold enough to operate for these pains or points of tenderness, but if he finds them over operable organs his confidence in the applicability of surgery is much greater. I contend that a study of the psychic make-up of the patient along with the clinical aspects of the case will commonly lead us right. Let us remember that operable structures have just as much right to disturbing but non-surgical symptoms as do those organs that we dare not touch with the knife. I am not scolding and I do not wish to leave the impression that mistakes are not constantly being made by the internist, individually and, I might almost say, collectively.

The surgeon who operates on most everybody that seeks his advice is no more to be censured than the internist who holds on to patients who by right should be in the hands of surgeons. And surgeons are not solely to blame for all the indefensible operations. Not a few of them are urged by internists whose therapeutic resources have been exhausted or whose conception of the proper field for surgery was never very correct. Some of us are still too loose in our diagnoses of catarrh of the stomach, intestinal indigestion and catarrhal colitis and hasten to attack those vague things unmindful of what cholecystitis, or appendicitis or a neuropathic constitution can do to bring on the symptoms in question.

A peculiar obligation rests upon the gastro enterologist to avoid the serious errors that may attend a too narrow view of his patient's complaints. If we stop to think how intimately the digestive tract is

related to the sympathetic and vagal systems and how wide a range of symptoms may come from their upsetting, we come at once to a realization of how important it is in the case of one presenting symptoms referable to his alimentary tract to study the phenomena presented in the light and only in the light of a very full and discriminating history not omitting the social and domestic aspects of life.

The same is true as to the symptoms referable to the cardio-vascular system, though I do not think bad advice so often given. At the same time there is opportunity for good judgment in advising patients coming with such symptoms, and good judgment is often not possible unless we take time to make a thorough study of the patient himself. At times the personality of a patient is at once an open book, to be read of any one. At other times it is only after most careful inquiry using information secured by others than the patient that we arrive at a just estimate of his psychic reactions.

In the study of a patient's symptoms pain comes in for most constant attention. Pain may be defined as a reaction following a stimulus, not forgetting that pain may be purely a mental representation with no stimulus to start the psychic element. The peripheral stimulus that results in pain is we know of the very widest variety. It can often be and is commonly measured with some accuracy and we are accustomed to think what kind and degree of pain should arise from various stimuli. Accurate measurement of stimuli and an accurate measurement of consequent pain are both alike impossible, but we count them both in terms of the average individual. Receptive psychic centers where pain is felt are far from being alike in all of us. How very differently some react to a given stimulus we know. The phlegmatic and the occupied person evinces no reaction from a stimulus that sets another person in a frenzy of distress. What is mere discomfort to one is to another of sensitive psyche a severe pain, disabling and crying for relief. I am quite sure we cannot always put a proper value on a patient's suffering, but a little observation will often convince us that the main factor in the case before us is not the stimulus, the pathology, but the character of the individual on whom the stimulus operates. There are many stimuli from our organs of vagal and sympathetic supply that normally never reach the threshold of mental appreciation. Our heart beats, our digestive processes, the intestinal functions, carry on and we are unaware of their workings as far as sensation goes. But if from real cause or from prolonged and abnormal attention to those functions we bring our psychic centers to a level at which we are cognizant of their workings, we are ready for a life of misery. Consciousness of food means we must not eat, consciousness of heart action means fear of heart disease, consciousness of the colon or rectum means enemas and purgatives; consciousness of ovaries, tampons, douches and operations.

The psychasthenic by inheritance or by introspection and meticulous analysis of all his sensations develops this low threshold of response and becomes thus the morbid and truly pitiable victim of a series of reactions that most of us would never feel. And these symptoms are not imaginary. His sensations are cruelly real. Only in his interpretation of them does his imagination run riot and thus add to his misery. It is not difficult to explain to a patient at least the elements of how mental impressions can produce symptoms, even very distressing symptoms. That the frightened individual becomes pale and weak, even prostrated; that sudden grief or anger inhibits all digestion and even produces vomiting, that a loathsome sight causes vomiting or fainting, are known to all people and serve at once to show that many and varied symptoms may naturally follow mental impressions whether from without or within. If a backache follows a fight or a quarrel or a disappointment, one thing is at least clear, stitching up the uterus will not relieve it, and the patient presenting such a situation can be made to see the reason. The headache or backache or joint pains that follow in the wake of worry, or late hours, or mental strain will not yield to tonsillectomy and the patient himself will recognize why. But not always. It is surprising how tenaciously a nervous patient will cling to an organic cause for his

symptoms and that too in the face of an enlightening family and personal history. "But Doctor, there must be a cause for this," is the plaintive response. And so there is cause, but it is human nature to lay a troublesome symptom on a germ or an imaginary toxin rather than on domestic unhappiness or business uncertainty or inherited nerve instability.

Pain, including headache, is by no means the only symptom that needs be studied in the light of the patient's psychic make-up. His appetite and digestion, his cardiac and vascular phenomena, the readiness of fatigue and other things not less insistent belong to a large group that lie in wait for any individual who has inherited or acquired nerve centers of impaired resistance and must be traced if possible to their real cause. We shall the better grasp the situation in many patients if we constantly ask ourselves, what is behind this story? How much of his family, his social, financial or other conflict has the patient presented here before me? It is a good habit to line up the results of our examination with the patient's complaints and to try to place the two in the attitude of cause and effect. If we do this we shall often feel assured there is something operative that makes the symptoms out of proportion with the pathology; that while there is organic disease the symptoms are largely [illegible] connected

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they studied under low power the patient himself and under the spell of the general view thus gained they secured a broad knowledge of the individual and were not confused by slight deviations from the normal in various organs.

In practical pursuance of the thoughts here expressed I would ask that every medical man no matter how narrow his field of work consider himself a distributing center, from which after a close study of his patient and his symptoms he keeps him for himself or just as readily recognizes that out of his field will not come rational therapeutics, and sends him to some one else—not forgetting the great value of psychotherapy. Such an attitude encourages professional fellowship, makes for the best results for the patient and, what is of no small importance, it makes for the dignity of our profession and for the esteem in which we are held by the public.

AN ANALYSIS, CLINICAL AND OTHERWISE, OF FOUR HUNDRED NON-SURGICAL DRAINAGES OF PATHOLOGIC GALL-BLADDERS*

By Geo. M. Niles, M.D.,
Atlanta, Ga.

This purports to be a clinical human-interest story. In this I shall attempt in a measure to portray some of the experiences and vicissitudes encountered in four hundred duodenal taps on ninety-nine patients. While at present our whole number of taps exceeds six hundred, and the patients about one hundred and forty, I have limited this study to a consideration of the first-mentioned numbers, as on them I have more exact data.

It will be understood that I refer to the state of contrary innervation, brought about by the injection of a solution of varying strength of magnesium sulphate into the duodenum and the subsequent aspiration of bile and other fluids. This

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principle, first enunciated by Meltzer, was brought into practical diagnostic and therapeutic use by Lyon and others, and has been employed over two years. I take it that most, if not all, of my hearers are familiar with the principles involved, as well as the technic of this procedure, as a rather voluminous literature on the subject has been available. I realize, however, that the question as to the propriety, expediency, indications and results, both present and future, is to an extent *sub judice*, and that many intelligent physicians still view it with skepticism. I, therefore, do not wish to appear as a rabid protagonist of this method, but simply place before you a recital of earnest efforts during one year, the work being done conjointly by my associate, Dr. H. N. Kraft, and myself.

CLINICAL CONSIDERATIONS

Of the ninety-nine, four were drained for chronic recurrent attacks of migraine, three for chronic cholecystitis with gallstones, one who had probable cancer of the gall-bladder or liver, two for acute catarrhal jaundice, one who had had her gall-bladder removed ten years ago, and had had choledochitis, thirty-six for cholecystitis (in some of whom gall-stones were suspected), eighteen for cholecystitis and choledochitis combined, and the others for chronic "biliousness," as manifested by indigestion, constipation, flatulence, malaise and a sallow "muddy" complexion.

NUMBER OF TAPS

In seven individuals only one tap was recorded. In the case of suspected cancer the results were poor and the prospect of aiding the patient unpromising, so she was sent home. In one other we failed to get the tube through the pylorus after long and arduous effort. This one was the only instance so far in our experience in which we have made such a failure. The other five, probably from pedicular frigidity, failed to show up again for other taps. One patient has had thirteen taps; two, twelve taps; one, eleven taps; five, ten taps; twelve, eight taps; and the remaining number, three to seven taps.

PRESENT EFFECT OF TAPS

A few have suffered some nausea during the seance, and four found it necessary to evacuate the bowels before the tap was completed. Most of them reported a free hydragogue catharsis almost immediately afterward, but not one has been unduly prostrated or made really ill by this procedure. Two have complained of severe headache, but it is probable that this was due to lack of food until rather late in the day. Most of the patients have cheerfully co-operated with us, seldom showing much nervousness or fatigue. This method in its entirety is by no means a trying ordeal, for most of those undergoing it were perfectly willing to try it again.

TIME OF SEANCE

The average time consumed is two and a half to three hours from start to finish. When we find that the color of the bile is lightening up and we are obtaining true liver bile, we then conclude by douching the duodenum with a solution of permanganate of potash. In a very few instances we have finished in two hours. Five hours is the longest we have consumed, and in this case the results were scanty and unsatisfactory. We have found, as a general rule, that if we do not succeed in getting into the duodenum and aspirating some bile in two and a half hours' time, it is best to stop and make another attempt a day or two later. We have generally gotten into the duodenum in from fifteen minutes to an hour, and, after injecting the magnesium sulphate solution, have usually recovered bile-stained fluid in from eight to fifteen minutes.

APPEARANCE OF RECOVERED FLUID

It is our custom frequently to inject into the stomach warm water as soon as the tube is introduced and the patient lies down on the right side. This water not only washes out the stomach, but, by stimulating gastric peristalsis, aids the metal tip on the tube to pass into the duodenum. In about 6 per cent of our cases the water returning from the stomach itself has been more or less colored by bile. In most of our patients, however, the water as it flowed from the stomach through the tube

soon cleared up, showing neither viscidity nor turbidity until the duodenum was entered. When the tip and some of the tube become engaged in the duodenum, the drippings of the aspirated fluid take on a pearly, viscid appearance, with an alkaline or neutral reaction. We then inject the magnesium sulphate solution and begin gentle aspiration. In nearly all, the first change of color is a light, yellowish green, though in a few instances the color has suddenly become a turbid green or a yellowish black. As the tap progresses, if the color does not become more pronounced in thirty minutes, we again inject the magnesium sulphate solution. Should the progress of the aspiration be slow, we inject several times about twenty c. c. of quite warm water. The two injections of magnesium sulphate are generally sufficient, though in twenty-four we have made the third injection. This third injection we used only in robust patients or those whose bowels were quite hard to move.

If the tap proceeds in a satisfactory manner, the fluid should soon assume a darker color, in some instances black and tarry, in others a turbid yellow or green. Where there is a duodenitis or a choledochitis present, there is much flocculent sediment, rendering aspiration slow and difficult. If the aspiration bottles are changed rather often during the seance, these variations of color will be more distinctly noted. From chronically infected gall-bladders or ducts will flow a dark green or dark yellow bile, sometimes of tarry consistency, with many flocculi appearing at intervals. This darkest bile is seldom over one and a half to two ounces in quantity and is followed by other bile gradually lightening in color until the yellow, fresh liver bile appears. By exercising care not to shake the aspirating bottle, we have in many instances been able to show three or four layers of distinctly different colors, ranging from the yellowish-green to darker yellow to almost black, and then the light yellow.

RESPONSE OF PATIENTS TO TAPS

Some patients respond quickly and easily, while others require much labor and patience to obtain adequate results. The latter class we have sometimes denominated "hard-boiled." About a third of our patients pass the tube into the duodenum in less than half an hour and the bile is flowing in less than fifteen minutes later. These generally get through with one or two injections of the 25 per cent solution, the seance being completed in a little over two hours. Approximately another third, being affected with a certain amount of duodenitis, require much pumping in and aspirating out small amounts of warm water to clear the ducts of mucus, flocculent sediment and, perhaps, many mucous plugs. When these are cleared out the rest is comparatively easy. The remaining third (the hard-boiled ones) are slow in every way. The tube is slow to enter the duodenum, the mucus is extremely hard to extract, the sphincter muscles of Oddi are slow to relax and the gall-bladder itself lags in its contraction. These cases tax our patience and ingenuity. In only five have we failed to aspirate some bile, and in two of these the taps were satisfactory on the second and third effort. In the three, however, after the third trial without any results whatever, no other attempts were made.

We nearly always use the 25 per cent solution to begin with, but if the response is tardy, we follow it up with the 33 per cent, unless the patient is of frail physique. In achieving satisfactory results with some of these slow, difficult duodenal taps, we should remember that success, like genius, resolves itself into "the infinite capacity for taking pains."

FREQUENCY OF TAPS

In a few instances, where time was a desideratum, we have made daily taps on three or four successive days. Our preference has been, however, to administer the taps on alternate days until three or four have been completed, and the others at intervals of five days to a week. Often we have advised patients to keep up the taps every two or three weeks for several months.

CLINICAL RESULTS

As we have pursued this method only one year, I hesitate to make claims too positive or dogmatic. We have two pa-

tients whose treatment for cholecystitis began a year ago, one of whom was dismissed in January last, the other in February. Both of these report that they have been well ever since. One of our migraine patients, a young married woman, who had been having attacks every two weeks for ten years, had eleven taps and has not had a headache since last May. The three gall-stone patients, though we informed them that surgery would be necessary, wished to try out the taps and each one claimed to feel better in many respects after each seance. Four, who suffered with chronic "biliousness" and constipation, have apparently been cured of the constipation. The two cases of catarrhal jaundice cleared up in less than two weeks. Perhaps a certain element of luck was with us in these, as we are not confident of such speedy results every time.

About 65 per cent of those who have received three or more taps have seemed substantially benefited. About 15 per cent have seemed moderately improved. Five, or practically 5 per cent of the number under consideration, have claimed no improvement whatever, and their claims were probably correct. The others are still under observation, some of them apparently improving, the rest belonging to that nondescript class called "drifters," of whom nothing positive can be said. On the whole we feel that in these 99 patients our labors have not been in vain.

PERMANENCE OF GOOD RESULTS

This is a mooted question and the time is not yet ripe for a specific answer. We believe (and this belief may be modified in the future) that many cases of cholecystitis, choledochitis, either separate or combined, where there is no gross pathology present, can be permanently cured by this method. Some cases of migraine can either be cured or considerably mitigated. The comprehensive condition known as "biliousness" seemingly can be overcome to a marked extent. I am often asked, "Will it be necessary to keep up these drainages at certain intervals for an indefinite length of time?" My answer is, "Suppose it does. If by an occasional emptying from the gall-bladder static and pathologic bile the patient obtains relief lasting for several weeks or months, and this emptying produces neither prostration or confinement in a hospital, why not continue it as the occasion demands?"

Like some sewerage systems, faultily constructed, which fail to function adequately, so, many individuals possess gall-bladders that are intrinsically faulty, though perhaps not surgically so. If by an occasional drainage these gall-bladders may satisfactorily function and their possessors may be made infinitely more comfortable, the fact that it should be kept up for quite a while should not militate against it as a general clinical proposition. Some gall-bladders tend to stasis for various reasons and to expect, after cleaning them, that they should remain permanently clean would be like expecting a dry cleaner to make your old suit look like new and guarantee it nevermore to become soiled or rusty.

We have at present six or eight patients, who, voluntarily and without our suggestion, occasionally come in for a duodenal tap, saying that it makes them feel much better.

CONCLUSIONS

First, non-surgical drainage of the pathologic gall-bladder is a worth while clinical method and has probably come to stay.

Second, it can not supplant surgery where there are gross pathologic lesions of the gall-bladder, as empyema, dense pericholecystitic adhesions, or where gall-stones are present.

Third, in some instances by early and adequate drainage this method may clear up certain cases that without it would have developed into surgical states.

Fourth, its employment is indicated in jaundice, cholecystitis, choledochitis, migraine and those indeterminate "bilious" conditions that have resisted other treatment.

Fifth, none of our patients have suffered marked depression nor illness as a result of this method, nor have I seen reported any such mishaps by other workers in this field.

Finally, we believe it possesses potentialities for good that will eventually be recognized by those who give the subject their thoughtful and sympathetic consideration.

TUBERCULIN*

By C. Hartwell Cocke, M.D.,
Asheville, N. C.

Since the announcement of tuberculin by Koch in 1890, some eight years after his discovery of the tubercle bacillus, heralded then as a specific diagnostic and therapeutic agent, the discussion has never ceased as to its value. Nor can we speak with absolute certainty of its value today, though we have learned many facts concerning its action, indications and usefulness, as well as dangers and contraindications. This has not come about easily, for from the first wild delirium of universal application and the resultant disastrous sequelae upon Koch's announcement of its curative and diagnostic value to the inevitable reaction which was bound to follow such widespread, indiscriminate and ignorant application, the pendulum has swung with here a champion and there an opponent denying it all virtue and heaping upon it every abuse. The truth, as might have been predicted, was with neither extremist and following the first era of general and disastrous administration and the second era of disuse and abuse, there came a more careful study of its effects and indications with a calmer and more reasoned judgment of its value. From all of this, however, knowledge has come and it is my endeavor this morning to present to you very briefly the salient facts and opinions generally held today, though I make no claim to a comprehensive review of so large a field in the short time allotted me this morning.

The vast literature on the subject of the tuberculin reaction attests the interest which the medical world has found in that group of symptoms which are produced by the introduction into a tuberculous animal of what is known as tuberculin. Koch was the first to discover these phenomena and used a tuberculin which was made by taking a six-to-eight-weeks old 5 per cent glycerin bouillon culture of tubercle bacilli, reducing it on a water bath to one-tenth its volume and filtering, the filtrate being known as O. T., or original tuberculin. It is a dark brown fluid, somewhat viscid with a sweetish, fragrant odor. Injecting this liquid into a healthy animal, Koch accurately observed and recorded with that gift of clarity of expression which was his to an unusual degree a certain series of phenomena totally different from those resulting from injection into a tuberculous animal. I can not improve upon his own description, which is as follows:

"When one vaccinates a healthy guinea pig with a pure culture of tubercle bacilli the wound as a rule closes and in the first few days seems to heal. However, in from ten to fourteen days a hard nodule appears which soon breaks down, leaving an ulcer that persists to the time of the death of the animal. There is quite a different sequence of events when a tuberculous guinea pig is vaccinated. For this experiment animals are best suited that have been successfully infected four to six weeks previously. In such an animal the inoculation wound likewise promptly unites. However, no nodule forms, but on the next or second day after a peculiar change occurs. The point of inoculation and the tissues about, over an area of from 0.1 to 1 cm. in diameter, grow hard and take on a dark discoloration. Observation on subsequent days makes it more and more apparent that the altered skin is necrotic. It is finally cast off and a shallow ulceration remains which usually heals quickly and permanently without the neighboring lymph glands becoming infected. Inoculated tubercle bacilli act very differently then upon the skin of healthy tuberculous guinea pigs. This striking action is not restricted to living tubercle bacilli, but is equally manifested by dead bacilli, whether they be killed by exposure to low temperature for a long time or to boiling temperature or by the action of various chemicals."

He then relates experiments which showed that killed pure cultures of tubercle bacilli ground up and suspended in water could safely be injected into healthy animals without producing any effect other than the local suppuration, but that tuberculous guinea pigs are killed by the injection in from six to forty-eight hours, according to the size of the dose. He produced extensive necrosis of the skin in these latter by giving a dose just short of the lethal one, which necrosis he proceeded to heal by the therapeutic administration at proper intervals of a considerable dilution of his suspension, the ulceration being succeeded by a scar, a process that never occurred without such a treatment. Upon these observations he established the basis of tuberculin therapy. It

*Abstract of a lecture delivered before the Oteen, U.S.P.H. Hospital No. 60, School for Tuberculosis, Sept. 23, 1921.

is not necessary here to give Koch's theory of the action of tuberculin. It does seem fitting, however, to relate further observations of his that have borne the test of time. In his first paper on the subject he states truthfully that tuberculin must be exhibited subcutaneously, being practically inert in the stomach, but assumed that man had a different reaction to it from the guinea pig because healthy guinea pigs may be given as high as 2 c. c. without a reaction, while healthy men react violently to .25 c. c. The cause of this error was of course his failure to know that healthy men harbored some focus of tuberculous infection and hence reacted to these heroic doses, while the guinea pigs, being free of infection, did not. He also noted the rather violent general and focal reactions in the tuberculous to .01 c. c., which is sufficient to cause a slight reaction in many healthy men.

The focal reaction is best seen in lupus. Within a few hours after injection the diseased skin becomes red and swollen and with the rise of temperature this redness and swelling increase to the point of necrosis. With the subsidence of the temperature, the swelling disappears and the lupus areas are covered with crusts which dry and fall off, leaving a smooth pink scar. The absolute specificity of the test is shown by the fact that only the tuberculous tissue has been involved in the reaction, none of the surrounding skin and scars having been involved in it. The same process doubtless obtains in tuberculous lungs, bones and glands. The general or constitutional reaction in man is well described by Koch from his own personal experience in the following words:

"From three to four hours after the injection pains in the limbs, depression, tendency to cough, dyspnea, the symptoms rapidly increasing in severity; after five hours an intense chill lasting almost an hour; at the same time nausea, vomiting and rise of temperature to 39° C. (102.2° F.); after about twelve hours the symptoms abated and the following day the temperature sank to normal; a feeling of weight in the limbs and depression persisted for several days and for the same length of time the point of injection remained red and painful."

We thus see that Koch observed truly that the tuberculin reaction is

1. Constitutional or general.
2. Focal, about the focus of disease, and
3. Local, at the site of injection (both more important than the first, and the third is less apt to be misleading).

The fact that there is great variation in these three features, such, for instance, as an intense local with slight general reaction, and that Koch did not fully appreciate the significance of the third or local reaction, in no way detracts from Koch's great work, though it is this latter reaction that at the present day assumes the chief role in our discussion of the tuberculin reaction.

Much work was necessary, but it was not long before it became established absolutely that the tuberculin reaction was specific, but specific only in that it indicates tuberculous infection and not disease in the clinical sense and hence it is no criterion of activity. Just what is the nature of the tuberculin reaction has never been conclusively determined, but whether due to exotoxins (toxins secreted by the organisms and present in culture media, probably the product of bacterial metabolism and characterized among other things by the readiness with which they stimulate the animal organisms to produce neutralizing bodies called antitoxin) or endotoxins (toxins intimately bound up in the living protoplasm of the bacteria and liberated only upon their disintegration and practically never stimulating antitoxin formation) we can not say. At any rate, all tuberculins, if active, whether filtrates or from bacillary bodies, produce the same reaction and differ only in degree and not in character, quantitatively and not qualitatively. Varying strains of bacilli with their different strengths naturally produce tuberculin of different strengths. And this much may be said without fear of contradiction, that all active tuberculins owe their activity to the presence of the specific protein of the tubercle bacillus, whether this be in solution, in ultra-microscopic particles, in microscopic particles or in unaltered bacillary bodies.

The number of tuberculins is legion, but since the reaction caused by their injection is always the same in character and varies only in degree, our discussion will deal only with Koch's original tuberculin, which is commonly spoken of as O. T. It is generally accepted that the reaction may

be interpreted in the light of a phenomenon of hypersensitiveness. Though the greatest amount of work on anaphylaxis has been done with horse serum, it is well to note that all proteins, including bacterial, present a very remarkable sensitizing power. True, certain difficulties arise in the acceptance of this expression of the tuberculin reaction, notably:

1. That it is impossible to produce hypersensitiveness by the injection of tuberculin in large or small amounts, at long or short intervals, in normal animals; and

2. Though Baldwin has partially succeeded in the attempt at passive transference of tuberculin hypersensitiveness, such attempts are not uniformly successful.

But this does not invalidate the general conclusion that the reaction is an expression of hypersensitiveness, for Baldwin and Krause have reproduced nearly all the important phenomena observed with horse serum and it seems fair to assume that protein hypersensitiveness and tuberculin sensitiveness are varying expressions of the same fundamental principle.

TUBERCULIN AND INSENSITIVENESS

A failure to obtain a reaction naturally occurs in

(a) uninfected individuals else the dictum of the absolute specificity of the test would not hold;

(b) certain persons who have clinically recovered from a tuberculous lesion and have lost their hypersensitiveness, though others show varying degrees of retaining it;

(c) acute tuberculous infections, notably miliary, though doubtless its presence might sometimes previously have been demonstrated and later obliterated, though even here the rule is quite variable;

(d) the incubation period, seven to fifteen days after infection before hypersensitiveness develops; during

(e) some infectious diseases, notably measles;

(f) advanced pulmonary tuberculosis, possibly through loss of reactive power, although it may be due, as Koch suggested, to saturation of the body cells with large amounts of tuberculin from the diseased focus;

(g) certain rare unexplained conditions, doubtless small lesions isolated from the general circulation; and finally

(h) those taking tuberculin treatment where, by the administration of gradually increasing doses, the hypersensitiveness is lost, although this is by no means a uniform possibility.

IMMUNITY IN TUBERCULOSIS

Since tuberculosis is so prone to relapse it was formerly held that no immunity developed in tuberculosis. We now know that it does confer a genuine immunity, though the protection afforded is not so apparent by reason of the nature of the disease, as is the case in certain acute infections. And it should further be noted that while tuberculosis confers immunity to tuberculous infection (else a general invasion of the system would be the almost inevitable result of all tuberculous disease) the original lesion may and quite frequently does progress. But while this immunity undoubtedly exists, it is only relative and for all practical purposes can never be considered absolute.

It has been absolutely demonstrated that persons who have mild tuberculous lesions are never successfully reinfected by fellow patients suffering from a severe disease, even when in close association, and Baldwin in a recent authoritative article, "Reinfection in Tuberculosis,"[1] states that "it is virtually impossible to associate many cases of clinical tuberculosis in adults with a recent exogenous source of infection except under family exposure," and another authority, Lawrason Brown in the same issue of the *Review* in "Some Causative Factors of Pulmonary Tuberculosis"[2] states that since the establishment of the Trudeau Sanatorium, thirty-six years ago, there has been but one case of tuberculosis developed in any of the employees and this particular case (one among many hundred employees) was so slight as to be possibly classed as doubtful and indeed could have been easily contracted elsewhere.

TUBERCULIN IN DIAGNOSIS: THE SUBCUTANEOUS TEST

The subcutaneous test will be described first. Koch's O. T. has been uniformly used for this and one proceeds by making up solutions of this using .8% salt solution with .25 or .5% carbolic acid as a diluent. Starting with pure tuberculin, by using a series of sterile bottles, making each successive bottle of the serial 10% of the strength of the former, one readily obtains a tuberculin of the desired strength. Thus, bottle No. 1, 1 c.c.=1000 mg.; of bottle No. 2, 1 c.c.=100 mg.; of bottle No. 3, 1 c.c.= 10 mg.; of bottle No. 4, 1 c.c.=1 mg.; of bottle No. 5, 1 c.c.=.1 mg. (or .0001 gm.); and of bottle No. 6, 1 c.c.=.01 mg.

For diagnostic purposes the usual dosage is from .1 mg. tuberculin up to 10 mg. Hence one needs for this purpose only bottles Nos. 3 and 4. Using the smaller dose, .1 mg., this is injected by means of a sterile tuberculin syringe subcutaneously into the back of the arm, although local reactions in the arm are more painful and discommoding to the patient. A positive reaction as before stated, is manifested by (first) constitutional symptoms such as malaise, general body pains, chilliness, and a rise of fever, which must amount to as much as 1° F. to have definite significance, and in the case of suspected pulmonary disease such manifestations as increased cough, expectoration, etc., are looked for. In vesical cases, note must be made of frequency of urination as well as the character and degree of pain, while in joint suspects one must look to the amount of pain and motility.

Since temperature, of all general symptoms, is the most important manifestation of a general reaction, careful observations must be made on the patient and recorded for several days prior to the test, at two hour intervals and continued throughout the test. The temperature should be uniformly below 99° F. before the test. The patient must be instructed to keep the thermometer under the tongue at least five minutes and should not make his observations when he has been in the cold for some time or has recently had something hot or cold to drink. The temperature rise is usually manifested in from 12 to 24 hours, hence the best time for making the injection is some time after 8 or 10 o'clock at night. A chart furnished the patient indicating what he must note, if no nurse is present, is a great aid. The (second) manifestation of the positive reaction is the *local*, or redness and swelling at the site of injection with swollen and tender regional glands, a most important guide and in the opinion of many the determining one by reason of the specificity of the test. The (third) or *focal* manifestation is quite difficult of appreciation unless the lesion be on the skin, in the larynx, or visible elsewhere. If the patient fails to react to the original injection of .1 mg., you may after a lapse of a sufficient number of days, say five or seven, inject 1 mg. and if the reaction still fails to occur after a further lapse give as much as five or even ten mg. If there is suspicion of a reaction it is the part of wisdom only to repeat and not increase the dose. In children naturally one uses smaller doses. Reactions are generally classified as mild, moderate, and severe, according to the height of the temperature. Only a local reaction may occur without the presence of a general reaction. The question of the proper interpretation of this is most difficult and is usually decided by the concomitant phenomena.

The test has been applied by hundreds of workers to thousands of patients and it has been found that from 40 to 60% of apparently healthy individuals react positively, and a smaller percentage of children, according to and increasing with age, and hence the limitations of its diagnostic value are at once apparent, and we can formulate the broad principle that a positive reaction to the subcutaneous tuberculin test is an index of tuberculous infection and not of tuberculous disease, nor is it further an index of activity if disease be present, for the degree of reaction is in no sense commensurate with the activity of the process. Brown and Heise reporting "Twenty-Four Years Experience with the Subcutaneous Tuberculin Test"[3] note the gradual disuse into which the test has fallen doubtless due to the fear of occasional severe reactions, the introduction of the cutaneous, intracutaneous, and ophthalmic tests, and of the x-ray, and the more widespread knowledge that a posi-

tive reaction does not necessarily mean tuberculous disease in the organ under consideration, and conclude that the test is now almost entirely restricted to patients without a definite parenchymatous x-ray pulmonary lesion, or in rare instances to those with an apparently healed parenchymatous pulmonary lesion, slight in extent; that those failing to react to 10 mg. O. T. may be safely returned to work; that over 90% of 75 patients with a history of hemoptysis and about 90% of 144 patients with dry pleurisy, and nine out of ten with wet pleurisy, reacted to the tuberculin test; but that it does not give any accurate information as to whether tuberculous disease is present or not, and if present does not give definite knowledge regarding its activity. A failure to react is however, of vastly more importance, for upon this we can with reasonable probability predicate the absence of an active tuberculous lesion.

THE CUTANEOUS TEST

This test originated by von Pirquet, is when positive, also a specific hypersensitive reaction analogous to the local reaction encountered in the subcutaneous test. The flexor surface of the forearm is usually chosen, as the skin here is more sensitive. It is cleansed with alcohol and dried whereupon two drops of pure tuberculin and one of the control solution, usually .5% phenol solution, are applied about six centimeters apart. With a scalpel or other sharp pointed instrument, two or three parallel lines are scraped through the control drop and then the tuberculin drops, to a depth sufficient to raise points of blood but not sufficient to cause a flow. After ten minutes the drops are mopped off and no shield is applied. At the end of twenty-four hours the arm is inspected and the presence of an areola in the tuberculin areas and not in the control is evidence of a positive test. The test is regarded as negative if there is no difference in the tuberculin areas and the control; slightly positive with definite though slight redness and infiltration; and moderate and severe with increasing redness and more marked infiltration, with possibly a line of lymphangitis.

This test also is specific and is found in increasing frequency from the second year of life, so that by the age of fourteen about 60% show evidence of tuberculous infection and after twenty-one years of age about 80%. It also fails to be positive in

1. Acute tuberculosis.
2. Terminal tuberculosis.
3. Acute infections.

Again we are forced to conclude that the cutaneous tuberculin test will show only tuberculous infection and not clinical disease and that its absence, particularly in children, is of greater import than its presence.

THE CONJUNCTIVAL TEST

This test is usually associated with the name of Calmette, though Wolff-Eisner conceived its application about the same time. Inspect the eyes for evidence of disease and for comparison of color of the conjunctiva, draw the lower lid forward so as to form a pouch, have the patient rotate the eyeball outward, and with a medicine dropper instill one drop of a 1% solution of tuberculin at the inner canthus. Excessive lacrimation of course vitiates the test. At the end of twenty-four hours a positive reaction is manifested by definite palpebral redness and secretion and a stronger reaction by greater redness and more secretion with subjective symptoms. The redness usually begins in about six or eight hours, and reaches its height in from twenty-four to thirty-six hours, and then rapidly subsides, in moderate reactions in two or three days, in more severe ones in five or six days. A subsequent test if given within six or twelve months should always be given in the opposite eye. Failure to observe this rule may cause infinite damage. Never use stronger than a 1% solution for the first installation. Any existing conjunctivitis or other inflammatory disease of the eye is an absolute contraindication as is also manifest scrofula, eczema, and any skin disease situated near the eye. It is also dangerous in the aged or arterio-sclerotic.

So many healthy people react to the test that it has more value in excluding tuberculous disease than in affirming its presence. For your purposes its dangers and

difficulties of proper interpretation greatly outweigh its possibilities.

OTHER TUBERCULIN TESTS

Of the percutaneous test of Moro, the intracutaneous test of Mantoux, and the depot or subcutaneous-local tuberculin test (Stichreaktion) only passing mention is made, as they have little place in the general practitioner's armamentarium. Experts in pulmonary diagnosis, however, are using today the intracutaneous test with increasing frequency. By reason of the possibility of what are known as secondary or recurrent reactions when tuberculin has been previously used in a patient, I believe it wise for the general practitioner to refrain from its use in such cases.

The order of sensitiveness of the three most commonly used tests is

1. The cutaneous
2. The subcutaneous
3. The conjunctival,

although the intracutaneous and subcutaneous-local, are both more sensitive than either of the above. Nor is there any constant relation between the various tests, the subcutaneous being positive when the cutaneous is negative, etc.

VALUE IN PROGNOSIS

Since tuberculin fails to give information as to prognosis that other methods of clinical observation give, it can not be relied upon as a prognostic agent.

VALUE IN DIAGNOSIS

The dangers in the diagnostic use of tuberculin have been mentioned and while not great if proper care is exercised, what of its value as a diagnostic agent in pulmonary tuberculosis? For some years to come, neither the tuberculin, the complement fixation, or any other test so far devised will begin to approach in value for the diagnosis of pulmonary tuberculosis careful, clinical examination which means a complete history, the most thorough physical examination, repeated as often as need be, temperature and other clinical observations, many examinations of the sputum as well as stereoscopic x-ray plates, and the study finally persisted in until all possibilities are exhausted. The test may then help, particularly if a focal reaction is present, but for the proper appreciation of this one must have acquired more than an ordinary competency in pulmonary examination. In bone, joint, and glandular tuberculosis, when the subcutaneous test is followed by a focal reaction, the diagnosis of tuberculous disease is so probable as to be almost certain, while a negative reaction would exclude it. In genito-urinary and pelvic tuberculosis, its value is still debatable.

TUBERCULIN IN TREATMENT

First I want to insist that tuberculin is not a cure for tuberculosis, but that it does seem to have distinct beneficial effect in the hands of the most skillful and experienced upon certain cases. The selection of the proper case for its administration, the proper dosage and interval, with a knowledge of when and how to increase the dose (for no hard and fast rule obtains), a sufficient knowledge of the pathology at hand and the effects of the tuberculin upon it together with knowledge of its effect upon the symptomatology, the dangers inherent in improper or over dosage with resultant uncontrollable reactions, all make it an agent that in the hands of one not possessing special knowledge of tuberculosis is very much more likely to result in harm than good to the patient. So I give you as my reasoned judgment two rules: first, remember that tuberculin is not a cure; and second, that until you have a special familiarity and considerable experience with tuberculosis, the therapeutic administration of tuberculin should not be attempted. And again for emphasis, as a diagnostic agent, it indicates only tuberculous infection and not disease.*

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2. American Review of Tuberculosis, Vol. 5, page 518.
3. American Review of Tuberculosis, Vol. 4, page 254 et seq.

*I have drawn very freely upon Hamman and Wolman's "Tuberculin in Diagnosis and Treatment" and commend it to your study.

INTESTINAL PARASITES IN EASTERN CUBA*

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This study of the intestinal parasites prevailing in eastern Cuba covers twelve months — September, 1920, to August, 1921. It was made at the United Fruit Company Hospital in Preston, Cuba, where the writer had charge of the medical service and the clinical laboratory. This Hospital serves the entire Preston Division, which is one of the largest sugar plantations in Cuba. It has a population varying during the year between eight and sixteen thousand people. About 40 per cent are Haytian laborers, 25 per cent Jamaicans, and about 10 per cent native Cubans. The remainder represents the smaller West Indian Islands---India, China, Europe and America. The proportion is somewhat different for patients admitted to the hospital, being higher for Haytians, few of whom could be cared for outside, and lower for Cubans who were frequently cared for at home.

The great majority of the Haytians are cane cutters and live in groups of 20 to 50 in barracones, which are shelters usually open on one or both sides. They sleep in hammocks and live chiefly on raw sugar cane and boiled green bananas or plantanos. Their cooking outfit as a rule is a tin can and three stones to set it on over a fire of branches and dry leaves. Several eat together from the common pot. Fingers frequently serve as spoons. The most common footwear is a canvas slipper with woven cord sole, which gives very little protection when the ground is wet. The privacy of the surrounding cane field and bush is often preferred to the privy. Soil pollution is unavoidable during wet periods.

The Jamaicans are chiefly employed in transportation, construction and development work. Many of them live in barracones like the Haytians, others live in small family groups in partitioned barracks, and many in good houses. There is usually a tendency to overcrowding, and ignorance of safeguards against spread of intestinal parasites is the rule.

The Cubans mostly live in private houses in the towns. Many of these houses are not under company control and are but hovels and shacks which often are very insanitary both inside and outside. Overcrowding, filth and flies abound. Chickens, goats and children mingle freely inside and out of the house. Spill-water and refuse go through the back door and the whole place is a fly's paradise. In Preston most of the Cuban mill workers live with their families in good houses provided by the company, but habits are about the same. There is a good system of garbage removal, privies are kept in good repair and drainage ditches cleared. But there is a general tendency to disregard and passively resist sanitary measures.

The climate throughout the year is favorable to insect pests and the spread of parasites. The mean temperature is near 80° F. all the year. August and September are dry, but from October to July there are occasional heavy rains and frequent showers. However, during the greater part of the year there is comparatively small chance for soil contamination with hookworm because even during wet periods the sun usually during part of the day gets a chance effectively to dry the surface.

The water supply is better and safer than in the surrounding country or on most other plantations. The water is carried in pipe line from an uninhabited mountain basin to all parts of the plantation.

The aim of this study is to demonstrate the types of intestinal parasites prevailing on one plantation and then through separation of the three main national groups to indicate the situation throughout eastern Cuba, where Haytians, Jamaicans and Cubans are the three native West Indian groups most frequently met. Finally it may serve as an approximate index of the three main West Indian Islands—Hayti, Jamaica and Cuba. The Cubans are at home. And the parasites harbored by the Haytians and Jamaicans can be considered to be mainly those of their native home, because the great ma-

*From the United Fruit Company Hospital, Preston, Oriente, Cuba.

jority studied in these two groups have been away from home less than a year.

A complete consecutive record was made of laboratory and clinical findings for all patients admitted to the hospital. The great majority were males fifteen to forty years of age. The reason for admission was malaria in about 50 per cent of cases.

TABLE I.

September, 1920-August, 1921	Total	Haytian	Jamaican	Cuban
Admissions	5613	2919	1599	343
		52.0%	28.5%	6.1%
Stools examined	3945	2029	1167	198
	70.3%	69.5%	73.0%	57.7%
Ankylostoma and Necator	1636	804	651	66
	41.5%	39.6%	55.8%	33.3%
Ascaris	780	547	204	13
	19.8%	26.9%	17.5%	6.6%
Trichocephalus	1341	705	370	62
	33.9%	34.2%	31.7%	31.3%
Strongyloides	183	53	75	27
	4.6%	2.6%	6.4%	13.6%
Trichomonas	195	119	36	9
	4.9%	5.7%	3.1%	4.5%
Balantidium coli	24	20	4	0
	0.6%	1.0%	0.3%	

About 16 per cent were surgical. Of the rest a large percentage were respiratory diseases. In comparatively few cases were intestinal parasites the direct cause of morbidity.

Blood, stool and urine of every patient were examined on admission as far as

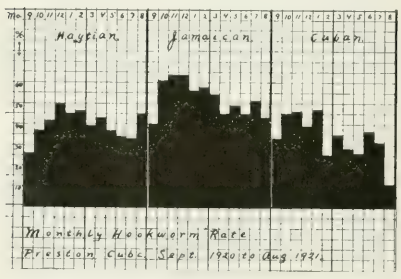

Fig. 1

practicable. For the routine examination of stools a small part of the fresh specimen was mixed with normal saline on a slide and examined under cover slip with low and medium power of the microscope. Whenever indicated special preparations and staining methods were used. The advantage of this method is that flagellates and other motile parasites are not killed. This is important when a general idea of all the prevailing parasites is desired. If the aim is to establish the maximum percentage, as in a hookworm survey, it is, of course, better to use some method of separating and concentrating the ova or to search the stool for adult parasites after a preliminary treatment. Such methods will usually reveal infestation in about 10 per cent more cases than are found by the microscopic method used in this study.

Only the more common parasites found are included in the general summary given in Table I. Cestodes and Oxyuris were

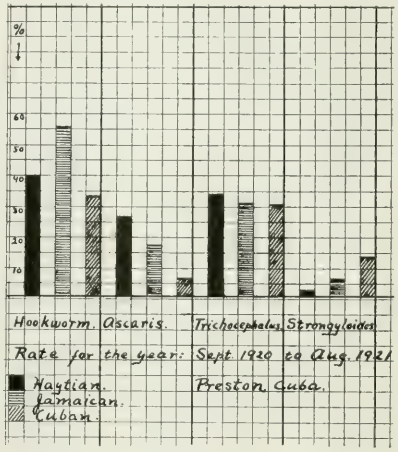

Fig. 2

rarely encountered. Prowazekia was seen in one case. Entamoeba coli was found occasionally. Entamoeba histolytica was found in 25 cases, many of which could be traced to surrounding towns and plantations where unsafe water supplies were used. The actual proportion of Ankylostoma duodenale and Necator Americanus was not determined. Of those examined nearly all were of the Necator type.

The monthly hookworm rate for Haytians, Jamaicans and Cubans is shown in Fig. 1. It will be noted that the high rates correspond with the beginning of the wet season. The seasonal variation, however,

is not marked. More information is gained by comparing the average percentages for the year in the different groups. The relative frequency of hookworm, ascaris, trichochephalus and strongyloides in

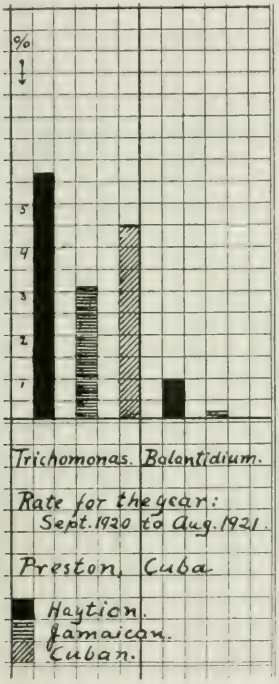

Fig. 3

Haytians, Jamaicans and Cubans is shown in Fig. 2. Hookworm is common in all three groups, but much more so in Jamaicans. Trichocephalus is equally prevalent in all groups. Ascaris is relatively much more frequent in Haytians than in Cubans, while strongyloides is common in Cubans, but relatively rare in Haytians. A similar comparison on a ten times larger scale is made in Fig. 3 for trichomonas intestinalis and balantidium coli.

During the year a few cases of mild diarrhea were seen in which an abundance of balantidium coli was the only cause in evidence. After one or two doses of magnesium sulphate or castor oil both the diarrhea and the balantidium coli would disappear. Trichomonas never seemed to cause any symptoms. It was observed in many cases not to be affected by any cathartic, vermifuge, or amebicide used.

Early in the year it was found that many cases of malaria which did not promptly respond to intensive treatment were heavily infested with hookworm. An effort was then made to diagnose and treat all cases of hookworm within the first twenty-four hours after admission unless there was evidence of acute pulmonary or renal disease or other serious contraindications. The result was that such cases usually improved and were cured with remarkable rapidity, many hospital days thus being saved. Later this system of treatment was extended to include most cases of ascaris and strongyloides. The treatment used was based on the findings of Darling reported during the last two years in publications of the Rockefeller Foundation and in various journals. It need not be repeated here.

A comprehensive system of hookworm control would have been highly desirable, but very difficult, as a local measure on account of the floating nature of the population. Co-operation between the various industrial units throughout the province as well as government co-operation would be essential as a basis for success.

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TROPICAL DISEASES AND PUBLIC HEALTH

PUBLIC HEALTH POLICIES AND THE MEDICAL PROFESSION*

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There is perhaps no period in the history of medicine during which there has been greater necessity for adjustments and reconstruction in the practice of medicine and in the methods employed in the prevention of disease than at the present time. When it is realized that there has been more progress in the medical sciences during the past half century than during the preceding 1800 years, it is not unnatural that problems should develop which will tax the best thought and constructive ability in their solution. During the past decade medical education has advanced with leaps and bounds so that the medical graduate of today is being so trained as to make it difficult for him to adapt himself to many rural areas, and he is therefore seeking more congested centers of population. This, in a measure, is due to the fact that the more highly trained medical student is seeking opportunity in the diagnosis and the treatment of disease which, at present, is not available in rural communities. This is resulting in a dearth of medical attention and skill in rural districts which is producing discontent and lack of sympathy between the great mass of the lay public and the medical profession.

There is also a need of adjustment between the surgeon, or specialist, and the remainder of the medical profession which is becoming increasingly more evident. It is being claimed that there should be a closer relation between the specialist and the general practitioner with reference to the problems confronting them, including the financial inequality in fees which at present exists. Again, the rapid organization and extension of public health activities during the past decade has resulted, to a certain extent, in misunderstanding between the profession and the public health official. Such problems are becoming of increasing importance in medical organizations in relation to their responsibilities to social medicine.

It is true that the medical profession is more largely responsible for the outstanding public health development in this country than doubtless all other influences combined. If one will review the transactions of the American Medical Association and the state societies, especially during the past half century, he will find that there has not been a meeting during which interest and constructive statesmanship was not manifest in instituting measures for the prevention of disease and the conservation of the public health. It is evident to any casual observer that this interest has been predominant in the minds of altruistic and public-spirited medical men throughout this country. With the public interest in mind, this is a period of stress and strain in our country, and it affords unprecedented opportunity for the medical profession to assume its full obligation in affording better medical service for the cure and prevention of disease. Will the profession meet this responsibility? Ours is a heritage of noble deeds, nobly done, to lighten the burden of grief and suffering of mankind, and therefore it follows that there will be no faltering in our ranks.

There are many problems and reforms impending which will have a far-reaching effect upon medical practice, such as the future of general practice; the relation of the specialist to the general practitioner; group medicine; the problems of medical education with special reference to early specialization; the problem of health insurance; the misconceptions that have arisen relative to state medicine, confusing the public and professional mind in their relation to public health administration; and lastly the health center, which has been variously designated as "community health service,' "county hospitals," "public health clinics" and "community centers for the promotion of health work."

*Oration on Public Health, Southern Medical Association, Fifteenth Annual Meeting, Hot Springs, Ark., Nov. 14-17, 1921.

Health insurance, as it is usually termed, is a form of compulsory, state supervised industrial insurance — social or health insurance, as it is frequently designated. It originated in Germany in 1883, and responsibility for its origination is attributed to Bismarck, then Chancellor of the German Empire. Later it was adopted in England and movements for its adoption in this country have arisen, headed by the American Association for Labor Legislation, in as many as fifteen states, but thus far in no state has legislation been effected for instituting such a system. Such a system is indeed foreign to the tradition of American institutions and, in fact, has no place in our system of medical service or as an integral part of our government. When properly analyzed, it will be found that "so-called" health insurance is not in reality founded upon principles for the promotion of the public health, but is purely and simply class legislation for the benefit of a certain group of individuals. It is pernicious in its conception and unjust in its application. If such a system were instituted in America it would rob the medical man of that initiative which is basic in the highest type of professional attainment and in rendering the best medical service. On the other hand, from a governmental standpoint, it would develop a system of paternalism in medical service with reference to the lay public, which would result in lowering the standards of the profession and have a degrading effect upon the citizen.

I think there can be no question but that there is much confusion in the mind of a good many physicians relative to the use of the terms "health insurance" and "state medicine." In a certain sense one implies the other, but there are those who are even confusing public health activities with what may be termed "state medicine," and there are others who have the impression that public health work, properly conducted, will lead either to health insurance or state medicine or both. There can be no just cause for apprehension on the part of any member of the profession that public health work, when conducted upon a sane and scientific basis, will even tend to the development of either health insurance or that indefinite something designated "state medicine." One would assume that the term "state medicine" implies subsidizing the medical profession by the government, state or national, not only for prevention, but for cure and treatment of disease. This is unthinkable when we realize that medical science is as old as recorded history, that it has adapted itself to the numerous changes that are incident to a long period of development, and that it has traditions of independence of thought and action, based upon meritorious achievement. It is, however, imperative that the policies which are advocated and used in the promotion of the public health shall be founded upon principles which will at all times conserve the interest of the practitioner of medicine.

This implies two obligations: a responsibility to be assumed by the health official in the conservation of the public health with due regard for the practitioner; and, on the other hand, a responsibility on the physician's part to sustain a broad-minded, liberal attitude towards the health official in his effort to adjust his relations to the public welfare and, at the same time, conserve the interest of the physician.

The American Red Cross has suggested the health center as a means of improving the conditions of medical service in a county or rural community. After the armistice was signed the American Red Cross was one of the few war-time organizations that did not revert to its peacetime status. On the other hand, it has endeavored to maintain its war-time membership and public support. During the war it developed an enormous membership of about twenty-two millions, which represented an organization of powerful potentiality, and the leaders of this organization felt that if this great influence could be focalized for the betterment of community life it would serve as a tremendous asset to existing permanent health agencies. They proposed two main projects: rural health centers and public health nursing. It is very clear that there has been definite development of public health nursing in many states or sections in which it was formerly not properly emphasized; but the establishment of so-called health centers has not attained a position in med-

ical service which warrants any conclusion relative to the value of this kind of organization for the improvement of health conditions and for affording proper curative facilities in the treatment of disease. As all new projects usually result in some confusion, in this phase of medical service activities have been projected in such a way as to meet with the disapproval of individual physicians, and even, in rather exceptional cases, of county, state and national medical organizations. There can be no question about the objectives of the proposed plan, but the differences of opinion and opposition that have arisen are the result of methods that have been used in certain localities and states.

The agitation which exists, not only among the medical profession, but also among the laity, relative to affording a better medical service for all the people, means that there is an imperative need for the medical profession to assume constructive leadership in directing the policies of the state and national government in effecting the proper readjustment of professional methods to social needs. Some plan must be effected whereby the family, as a social unit, shall be given a more wholesome sanitary environment, better protection from transmissible diseases, and a medical service which is more in keeping with the advancement that has been made in medical science.

The physicians of a community, or county, form the first line of defense against disease. It is therefore fundamental that the public health policies employed shall be adopted with the knowledge and co-operation of the profession. There can never be a distinct line of cleavage between preventive and curative medicine, and in any scheme of medical service there must of necessity be brought together in close co-ordination the distinctively public health policies and the activities of the practitioner of medicine. While the methods of the public health official deal with the people, in the main *en masse*, it is also desirable that the duties of the practitioner of medicine shall follow in the sphere of dealing with the community as well as the individual. Then, if the physician is to undertake the responsibility for social service as part of his professional obligation, it behooves us to discuss social medicine and its problems in our medical organizations and journals as carefully as the problems of medicine as they pertain to the individual.

The execution of public health work upon an intelligent and economic basis is impossible without reliable morbidity reports. These should be obtained not only from the physician, but from parents, superintendents of schools, heads of institutions and others who occupy positions of responsibility in relation to groups of individuals. In obtaining such data it would appear to me a useless procedure to request a physician, or any one else, to make immediate report of the occurrence of a disease unless prompt and scientific measures are used to prevent and control it. In other words, what use can there be in having a physician make a report of a disease as soon as suspected and diagnosed unless steps are taken to control the disease? It is a fact that too little emphasis is placed upon the control of disease at its source, and if the infectious diseases are to be suppressed and kept under control it is imperative that there should be close correlation between the health official and physician in not only securing a prompt report as to the outbreak of an acute, infectious disease, but in its actual prevention. It then follows that obtaining prompt morbidity reports is justifiable only upon a basis that such information is utilized in the prevention, control, and ultimate suppression of infection.

With the increased appropriations and enlargement of state and local health departments, new problems have arisen for the health official in relation to the physician and to community life. One of the phases of health work that has developed within recent years is child welfare, including the medical examination of school children. Bureaus of child welfare have been organized in departments of health in about thirty-five states. In some states this work includes the general activities that pertain to child health; in other states there has been developed a more intensive plan, which involves the supervision of midwives, nutrition clinics, and medical examination of school children, including corrective work. With this new phase of

public health work the term "clinic" has been used merely to indicate that certain corrective work is being done, not primarily through the health department, but by utilization of the talent and skill of specialists and local physicians. It is conceded that the medical examination of school children is a function of the health department, and it has been shown by the examination of many millions of children that unless proper follow-up methods are used to obtain correction of physical defects, by the health department and other agencies that may be employed, that only about 10 per cent of corrections can be expected. When it is realized that the examination of the school children of the state involves many hundreds of thousands of children, and that this work will have perhaps the most far-reaching effect of anything that can be done towards the protection of the health of the child, it is obviously a great waste in time and money to the state unless it be followed up and provision made for demonstrating its importance and obtaining a large per cent of corrections. It therefore frequently becomes necessary for the health official to devise ways and means to have the corrective work done in a community.

While the health official should use his ingenuity to direct and utilize the local agencies for effecting this result, under no circumstances should any of the corrective work be actually done by a representative of the health department. This should be accomplished through the co-operation of the local physicians and, when necessary, utilizing the specialist. In other words, it is distinctly the function of the medical profession to be entirely responsible for such corrective work as may be desirable, and such financial arrangements as may be essential should be effected between the physician and the patient. The selection of the physician or specialist should be done independently of any suggestions or advice from the representative of the state or local health departments. This is a matter that should be left entirely to the discretion and judgment of the patient and the family physician.

No responsibility should be assumed by the representatives of the health department for the remuneration of the specialist or physician doing corrective work, but there should be some plan devised by which those who are unable to secure such services can obtain it free of cost. It would seem to me to be out of keeping with the dignity of a great profession to suggest any plan which would involve a uniform fee system in such work, but on the other hand, this should be, as in private practice, left to the integrity and spirit of service of the physician in the betterment of community life. If corrective work is done upon such a basis, there can be no just reason for the physician to object to the methods employed, or fail to give his hearty support and co-operation to the public health official in his efforts to conserve the greatest potential asset of the state—child health.

It may be well to remind ourselves of the fact that there are certain privileges and advantages to the medical profession accruing from the results of public health work. The cornerstone of public health work is education. The medium through which the physician can best reach the public mind is through an efficiently conducted health department. This principle not only applies to the individual physician, but also to medical organizations. The vitalizing influence of any medical organization is determined by its ability to project its ideas in preventive medicine so that they may reach the public ear in an effective manner. The physician is primarily concerned with curative medicine, and therefore his interest and concern in social medicine can frequently be most effectively expressed through the public health official. The great mass of the people are ignorant relative to personal hygiene and the methods to be employed in the prevention of disease. It is, therefore, clear that the education of the public by focalizing our efforts through the trained health official will be invaluable in impressing the public with the benefits to be derived from scientific medicine.

It is a statistical fact that approximately 40 per cent of all births are attended by ignorant midwives without consulting or advising with a physician, except when it becomes necessary to consult the physician in cases which have frequently reached a condition beyond his control. This situa-

tion has a tremendous effect in increasing maternity and infant death rate. It therefore becomes the function of the health department as rapidly as possible to correct a condition attended with such grave consequences. When this condition is corrected, it will contribute not only to the public welfare, but it will be of material advantage to the physician.

An analogous fact is that in at least 40 per cent of the cases of venereal disease the patients do not consult a physician, but rather seek advice of some druggist or some one who has had a similar experience, or follow the advice of some glaring advertisement and fall into the hands of the quack. Then, too, the mortality from cancer is on the increase throughout the entire country, though the principles involved in the prevention of this disease are, in the main, simple. The average citizen does not know what predisposes to cancer nor understand that an early diagnosis is essential in its prevention. While cancer represents a disease which will doubtless never be entirely controlled, we can at least hope for a reduction in its incidence by intensive educational methods. These examples will serve to emphasize some of the problems the solution of which will mean much to the medical profession and will have a far-reaching effect upon civilization.

While it is important that sufficient and adequate support be given to state departments of health, the strength that may be developed through a central organization should never assume the form of undue centralization of power, or what is sometimes referred to as bureaucracy. We should not lose sight of the fact that the most fundamental principle of democracy is the administration of local government by those who are especially concerned, and who use the central organization for making and enforcing laws, to develop local health work, and for formulating plans and policies in an advisory and supervisory capacity.

After all is said and done, the thing of paramount importance in either community, municipality or county is to create in the mind of the citizen a health conscience which will inevitably assume, in its full development, what may be aptly termed a "community health conscience" for the betterment of health conditions. This means more than simply preventing a certain disease or dealing with a particular health problem, but it rather implies the broad program of health work, involving habits formed in the home, instruction given at school, and the application of such instruction and the influence that may be created in a community by the physician for the improvement of health conditions to prevent the invasion of the family by communicable disease.

We live in a section of undeveloped resources, and in the final analysis there is perhaps no one thing which will count more in material development than the control and suppression of those diseases which have so long afflicted our people, and which we know to be preventable. Great strides are being made in improving health conditions not only in the South, but throughout the entire country, but we, as physicians of this Association, should covet leadership in creating that kind of health conscience in our Southland which will mean greater productive efficiency.

ESSENTIALS OF SUCCESSFUL LEADERSHIP FOR PUBLIC HEALTH WORK ON A COUNTY BASIS*

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In attempting to meet the challenge of the unparalleled opportunities of our present day, my personal experience as an executive has been sufficiently chastening to forestall any tendency toward egotism and successful enough to make apologies for this discussion unnecessary. Out of this experience I venture to bring to this body of health workers some conclusions which I have arrived at and tentative answers to a series of questions which I consider fundamental to a solution of our common problems.

Throughout the South the county has become a well established unit of local gov-

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ernment. Many of our counties present both urban and rural problems. A somewhat exaggerated community consciousness is a common characteristic of Southern folk generally and of public officials in particular. This leads to a keen sense of aloofness in the affairs of the city with relation to those of the surrounding country districts, and vice versa.

So universal is this manifestation of separate mindedness that it is with utmost difficulty that the urban and rural elements in a county can be induced to recognize an identity of interest in even the fundamental human requirements.

To this is added the very real difficulty of administering any governmental activity on a county basis so ably as to insure a just distribution of the benefits derived from tax funds to each of the contributing agencies.

These two problems call for ability to devise a plan of health work for an entire county giving due consideration to the apportionment of funds, the selection and distribution of activities and the assignment of personnel.

Successful public health leadership carries with it the idea of permanency. With this axiom before us a new problem presents itself dealing with the necessary qualifications of the health executive and the source of a constantly enlarging supply of professional workers for the health field. Our topic is thus resolved into three lines of inquiry:

1. What are the necessary qualifications for success as a county health officer? What preliminary education and training does the office require?

2. How may suitable candidates for these positions be found and their interest and endeavor permanently enlisted in this field?

3. To what extent may adequate supervision by the state board of health contribute to an uninterrupted yield of results in definite units of work accomplished while at the same time aiding in the growth of the professional personnel.

Question 1.—What are the necessary qualifications for success as a county health officer? What preliminary education and training does the office require?

I shall set up as a preliminary requirement for success as a county health officer that he understand something of the operation of the laws of human conduct: the psychology of the rural group mind as distinguished from the urban group mind.

Since the county health officer will not be concerned primarily with objects or things, but with people and organizations, it behooves him to know what reactions he may expect from given stimuli, applied under stated conditions, in order that he may induce the conduct which he desires by providing the motives for it.

He must, in short, possess the qualities of leadership; these involve, among other things, a highly developed instinct of self-assertion which has been dedicated unreservedly to the public welfare, thereby holding in complete restraint the self-regarding instinct. A volume might be written upon this theme without exhausting its powers for illumination. I shall permit myself but a brief statement:

Lest it should be feared that the hard-headed business man who thinks first of his own interest is unconditionally ruled out of the successful class by our definition of the qualities of leadership, I wish to register a conviction that the executive who best serves his own interest and who ultimately reaps the rewards and satisfaction of popular applause is the one who accords the freest exercise of initiative to his subordinates, who gives the largest measure of credit to assistants who work out the details of a project, and who bows with utmost deference to the will of the people.

It is my conviction that the successful health officer will go into a county and proceed to study the integral parts of the county citizenship, learning first hand from the people themselves where they feel that they "belong" and what are the common interests which hold their communities and neighborhoods together. He will thereafter recognize and make use of these natural groupings of the people and respect the priority of the common interest which has made itself felt and found some degree of expression in common action. He will endeavor to support and expand this basis for community action until it includes the entire physical welfare of the group. To

this conscious interest in community welfare he will make his appeal for united action against preventable diseases rather than to the purely selfish individualistic interests of the people; he will strive to awaken a pride of possession in the well-equipped and adequately financed health service as well as in an up-to-date properly sanitated school building.

Such a health officer is laying the foundation for a permanent health structure which shall assure to the people of the county an increasingly satisfactory future.

Health occupies a unique position among the basic needs of humanity in that it is equally needful to the preservation of the individual and of society. Other basic needs may be divided into two groups. The first ministers to the physical well-being of the individual, assuring the preservation of life by means of food, shelter and clothing. The second is primarily important to the preservation of the higher forms of civilized society, notably a democracy, by furnishing the citizens with education, moral and religious training and opportunity for self-expression.

Each of the numerous public welfare agencies with which the health officer must establish working relations has selected as its objective the correction of conditions due to a lack of one or more of these fundamental necessities. These agencies invariably discover that the health problem is closely interrelated to the ones with which they are dealing and that the health interest offers the strongest possible appeal for the extension of their chosen program. It is natural that these agencies should each elect to maintain a subsidiary health program in the interest of their main objectives. It is likewise to be expected that a rapid multiplication of health programs may be the occasion of some apprehension on the part of the health officer who wishes above all things to avoid confusion and duplication while health activities are still in a formative stage.

This situation offers to the capable executive opportunity for the exercise of unusual qualities of statesmanship and holds for the less competent leader dire possibilities in development of trivial antagonisms among the various groups of workers. These hostilities are usually due to unwarranted suspicions and lack of understanding, but are sometimes the result of morbid expressions of the self-assertive instinct. At their best, these unreasonable animosities are calculated to try the soul of the leader in health organization while at their worst they may tend to demoralize and disrupt the cohesive elements which hold the health machinery together. The narrow spirit of hostility will be eliminated to the extent, I believe, to which the health organization succeeds in functioning as a co-ordinating force for the health activities of all the agencies which are concerned with community welfare.

The health officer needs to study the health problems of each welfare agency from its own special viewpoint, thinking through their respective thought channels, if you please. In considering the health problems of the board of education he needs to assume the point of view of the school man and the teacher of our boys and girls. The health interests of other special groups represented in the community by their own organizations should be studied in the same way for the purpose of interpreting the official health program in terms of the felt needs of the group.

The county health officer must have medical education of a high order, but this does not mean that he must start his career with a knowledge of everything included in the field of public health. He does require a foundation of scientific knowledge on which he can build as the need arises.

It will be a distinct advantage to the novice if he can be given an opportunity to observe a successful county health unit in operation. An effective training field should stimulate the trainee to make an intelligent study of his territory and to adapt to the needs of the county to which he is called the same principles which have set other health units upon a successful course.

A special course in public health, if this is practical or possible, is eminently desirable, but it is not, in my opinion, essential to the success of our present pioneer plans in a county health organization. The smaller the beginnings and the less secure the position of public health as a government function, the more surely will the

health officer's paramount need prove to be ability for generalship rather than technical knowledge. At the risk of revealing a deplorable lack of enlightenment on my own account I shall confess that I know of no school that even attempts to develop students into social engineers for health organization. This is what the health officer in a pioneer field needs to be.

Question 2.—How may suitable candidates for these positions be found and their interest and endeavor permanently enlisted in this field?

Where shall we seek promising candidates for the position of county health officer?

Every source that is open is worth investigating; the graduating classes of our medical schools; the special courses in public health; practicing physicians in the county to be supplied with a health officer and in adjacent counties or states. Other things being equal, the home-grown product has many advantages which may be summarized by saying that he has, to begin with, a knowledge of people and communities within the county which an imported man will need at least six months to acquire. My own experience with the country doctor has been very encouraging.

The selection of prospects should not be left to chance or to the initiative of the candidates. Each should be considered without prejudice and the question of his adaptability decided upon its merits, the verdict being rendered with absolute frankness devoid of sentiment.

Most successful health officers are handpicked. They are enlisted only after an enthusiast in the field has "sold" them the idea in a conversation covering the following points:

1. Opportunities for service and for individual growth in the public health field.

2. Handicaps and disadvantages which fling their challenge at the man of courage.

3. Personal qualifications necessary: preparation and experience necessary or desirable.

4. Opportunities available for apprenticeship training.

5. Minimum and maximum remuneration to be expected with opportunities for advancement.

Question 3.—To what extent may adequate supervision by the state board of health contribute to an uninterrupted yield of results in definite units of work accomplished, while at the same time aiding in the growth of the professional personnel?

The contribution which the state board of health may make to the success of the county health unit and the growth of its personnel is dependent upon so many conditions which vary so greatly under the laws of different states that I shall make no attempt to outline a definite plan of supervision. I shall instead cite a few of the common obstacles to the success of any plan of supervision carried out by a state board of health and, after an examination of these difficulties, suggest, if I may, a possible source of relief from them.

The inviolability of local self-government is a deeply cherished tradition of the South, second only in importance to the sanctity of the home. Whenever a state agency blunders in its approach to the people their distrust and fear of paternalism is aroused.

Whenever the state board of health machinery, which is seldom perfectly organized, slips a cog or omits a courtesy in dealing with a county health unit, this human agency reacts according to a well-known law of cause and effect. There is a disharmony which defeats the purpose of whatever system of supervision is in force.

If we fail to co-ordinate with the official health program, the health activities of the various agencies in a county, a deadlock of all health machinery results and frequently loss of public support and ultimate elimination of the government health function.

I believe there may be and sometimes is an analogous situation within state boards of health. The rapid development of functional bureaus in response to an overstimulated public demand has been complicated by failure effectively to assimilate the numerous new functions or to co-ordinate them to a perfectly organized whole. In addition to a deadlock between bureaus this has resulted to a deplorable degree in discrediting or crippling the promotional influence which the state board of

health should exercise over county health units. In some instances it has resulted in a loss of public support for state work. In others its gravest outcome has been the limitation of the state's contribution to the development of county health units by reason of the breakdown at one or more points of the state's system of supervision.

The first requirement, then, for a greater measure of success on the part of the state board of health in promoting county health activities seems to be more clearly defined objectives and methods within the state organization, particularly with relation to interdepartmental adjustments.

"Physician, health thyself," has long been an expression of popular distrust of proposed systems of social reform or spiritual salvation. Can we hope to participate in any large way in the promotion within our counties of a strong leadership in the administration of measures aimed at the physical regeneration of the race if we have not, in the meantime, "set our own house in order?"

To summarize, then, my tentative answers to the line of inquiry proposed:

The primary requirements for successful leadership for public health work on a county basis is native ability to deal with people, supplemented by a medical education and an understanding of the operation of law in human conduct particularly with relation to rural psychology.

A detailed and comprehensive knowledge of scientific phases of the health field seem less essential to the health officer in the early beginnings of health organization than ability to anticipate popular needs and harmonize divergent interests.

Candidates for these positions should be intelligently recruited from every possible source. Their qualifications for the task should be observed under favorable conditions as may be found and the question of their fitness decided without prejudice.

The extent to which effective supervision by the state board of health may contribute to an uninterrupted yield of results in county health work and to the continued individual growth of professional personnel is dependent upon a set of conditions in which are inextricably interwoven problems of organization and administration, such as:

Wise and fortunate selection of personnel.

Subordination of unduly self-seeking motives in functional bureaus and their staffs.

Clear enunciation of objectives and fundamental principles.

Precision of adjustment of each individual to his place in the state organization.

Sureness with which the whole is moved by a will to think and act as a unit.

Only, I believe, as we approach this ideal shall we be able even to approximate our full measure of usefulness as a state health agency.

SURGERY

RAILWAY, INDUSTRIAL, GYNECOLOGICAL, OBSTETRICAL AND UROLOGICAL

THE IDEALS OF THE SURGEON*

By J. Shelton Horsley, M.D.,
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Much has been written in recent years about the training of a surgeon. His premedical studies, his work at the medical school, his years of apprenticeship, have been fully discussed. His course has been made long and arduous. It is easy for those who have arrived to prescribe difficult conditions for those who have not.

Very little has been said, however, about the life of the surgeon, what are his innermost thoughts, what are his ambitions and his daily accomplishments. We should not lose sight of the fact that what really counts in life is not how a man started, but how he finished. The end result is the product of his professional and his personal career. A splendid training imposes great obligations, but if it brings merely the smug satisfaction of a superior beginning, the training has failed.

"As a man thinketh, so is he." His constant thoughts, his earnest desires, constitute his ideal. I believe it was Disraeli who said that religion is not a thing to be discussed among gentlemen. A man's true ideals are more intimate than his religion, but it is only a very false modesty that would prohibit a full consideration of the guiding star of a surgeon's career.

In common with all inhabitants of a free country, the surgeon is supposed to have inalienable and constitutional rights to life, liberty and the pursuit of happiness. The pursuit of happiness is a very unfortunate phrase, for real happiness, when deliberately pursued, is never overtaken. It must come as an incident to a full life. Animal pleasures and gratifications that bring temporary pleasant sensations do not constitute real happiness. Ideas of happiness can be debased or cultivated, like a conscience. True happiness is within us and does not depend upon externals. It is always connected with a sense of service. It is difficult at first glance to associate a surgeon's life with happiness. Is there any greater depth of agony than sometimes comes to the conscientious surgeon when he realizes that his patient is dying because of his failure to grasp the significance of some feature of the case, or because of his neglect to perform properly some step of the operation? He would give anything for the opportunity to do this over again, but the opportunity has gone forever. His only consolation, pitiful though it be, is that he has learned something by his mistake and he can do better the next time. The inward satisfaction, however, when a desperately ill patient recovers, when skill or wisdom learned from past failures results in new success, will bring a serene happiness that compensates to some extent for the cup of bitterness.

Happiness, then, being an incident, can not be included in the surgeon's ideals, but results from approximation to high ideals. The words "high ideals" seem to belong together, just as we speak of a "bad cold." But though all "colds" may be "bad," there is many an "ideal" that is not "high," and if easily attained it is usually because it is too low. As they shape one's life we can only know a man's ideals by an analysis of his life after it has been completed. Applying this test, it is remarkable to see that the things one is striving for in his own life seem trivial, or even undesirable, when viewed historically in the life of some one else. How would we wish our lives to be known by posterity? Would a surgeon desire his survivors to think of him chiefly because he had accumulated riches during the practice of his profession? Would he care to be known as an artful politician? Would a posthumous reputation as one who had great influence

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and used it despotically appeal to him? Would he wish to be considered a man who desired "to seem" rather than "to be"—to pretend to great learning and skill and practice, which he knew he did not possess? While the surgeon is living, many of these things seem desirable and prove great temptations to him, but how hollow and worthless they appear in a life that is spent! We can not, following the proverbial death-bed repentance, indulge in these temptations and expect to reform and live a better life after we have accomplished this immediate goal. The habit becomes inexorably woven as an integral part of character.

The surgeon who has what Rowntree calls a "lust for truth," not some time in the future, but now and here, who makes an earnest effort to go to the bottom of every case, who tries to the best of his ability "to do justly, and to love mercy, and to walk humbly"—such a surgeon has the highest of all ideals. He will not fully attain his ideal, but if in season and out of season, through good report and bad report, he ponders on his ideal and struggles after it, his life will be a satisfaction to himself, an inspiration to his colleagues, and a benediction to his country.

Let us see how some of these abstract idealistic things can be translated into terms of the busy, every-day life of the surgeon. First of all, he can constantly learn from his cases to improve not only his technic, but his methods of diagnosis and interpretation of what he finds before, during and after operation. The biologic processes that follow every operation are intensely instructive. If the patient dies, a necropsy should be obtained, particularly if the cause of death is not obvious. Our failures are our greatest assets, if we will only face them squarely and study them carefully. A surgeon can usually secure a post-mortem examination if he earnestly desires it. A tactful and prompt approach to the relatives with an explanation that no unnecessary mutilation will be done, that other members of the family may have the same disease and that an accurate knowledge of the cause of death will increase the surgeon's usefulness to his patients, rarely fails to secure the necessary permission. But the surgeon must be prepared to acknowledge his errors if the necropsy shows them, however mortifying they may seem. Many deaths that might have passed as heart failure, shock, or asthenia will be found at necropsy to be due, as Dr. W. J. Mayo says, to very real things, and it is the surgeon's duty to see that "these dead have not died in vain."

The surgeon should study pathology. He may or may not be his own pathologist. If he has a large practice and has access to a pathologist he should at least examine carefully the gross specimen he removes at operation and ask the pathologist to demonstrate to him the microscopic section of every tumor he operates upon. He should always have time for this, even if he must do less operating in order to give more attention to pathology. The relationship of physiology and pathology to surgery can not be too intimate. What can be more interesting for a surgeon with scientific curiosity than to view the histology of an unusual tumor that he has just removed? Who can doubt that one who studies the tumor he removes and who has a mental image of its gross and histologic structure is, other things being equal, more competent to deal with tumors than the surgeon who leaves this for some one else to do? Dr. T. S. Cullen has spoken of the lack of interest in pathology as the weak spot in American surgery. Pathology is a very vital spot and gives a leaning to the scientific side of surgery and an added interest in underlying principles that mere dexterity in mechanical technic can never bring. It tends to keep the surgeon from being merely a "cutter."

The ideal of the surgeon's relation to his patient is obvious from what has been already said. Unless he strives to "do justly, to love mercy, to walk humbly" by his patients, as well as his fellowman, his skill and learning are as sounding brass or tinkling cymbal. Efficiency without character is a poor staff to lean upon. But to "do justly," I think, with Dr. Richard Cabot, that every surgeon or physician should tell his patient the truth. It is not necessary to ram brutal facts into an unwilling patient, but if the patient is told anything it should be the truth. This subject should be viewed from several different points. Telling an untruth injures the

character of the one who tells it. It is doubtful whether the color scheme of lies, classifying some as "white lies" and others as "black lies," with intermediate shades, has any justification. Most patients, as a matter of fact, find out sooner or later that they have been deceived. A woman who has cancer of the breast and who is told by a surgeon, at the request of the patient's daughter, that she has no malignant disease, will eventually learn the truth. If the cancer is inoperable her death results in a few months and the remainder of her life will be in a "fool's paradise" until at its later stages, when the facts force themselves upon her. Besides, if the daughter afterwards develops a breast tumor, she will probably not believe what the surgeon tells her. As a rule, even though the patient may apparently be nervous, the truth tactfully told has much less upsetting effect than is generally supposed, for the patient knows the situation at its worst and has a faith and confidence in the surgeon that would otherwise be impossible. Co-operation then is always more satisfactory.

The effect on society of making a practice of deceiving a patient is sometimes far-reaching. Doctors often complain that the public has but little confidence in them. If a doctor deliberately deceives a patient, he can not expect any more confidence than would be given to a chiropractor or an osteopath. There is little to choose between honest ignorance and knowledge combined with a deliberate intention to deceive. There is no operation or treatment so complicated that the patient, if of average intelligence, can not understand its essentials, if the surgeon knows the subject well and has the ability to explain it. Frankly telling the patient and the relatives of the patient the main points in the diagnosis, the operation and the after-treatment, treating them as rational human beings instead of as irresponsible children, is an important measure in establishing the confidence of the public.

The ideals of a surgeon in regard to medical and surgical societies should be such as duty seems to dictate. He should, of course, be a member of his county society and of his state medical society, of the American Medical Association, and, if in its territory, of the Southern Medical Association. He should contribute in every way he can to the elevation of the profession to which he belongs. He should love, cherish and nurture it. His thoughts and ideals should be so fixed on doing his best that his own conscience can commend him and he will then possess no overweaning ambition to have his life work tagged by some individual or some society. To desire the approval of others whose opinion one respects is natural and proper, but membership in special societies or honors conferred by being made an officer in any medical or surgical association should come largely, if not entirely, as a result of worthy professional work. If they do not come in this way they do not mean anything. If a "friend at court" is necessary for a deserving surgeon to gain membership in a special society, such membership ceases to be attractive. If honors in any surgical or medical society are obtained only by resorting to political tricks they become veritable Dead Sea fruit. Medical or surgical associations whose chief object is to elevate medicine or surgery should, of course, be encouraged by all proper means, but there is the serious practical objection to this type of society that the very surgeons whom the originators intended to suppress are most keenly desirous of being members in order thereby to have their somewhat dubious careers stamped with approval. Being, as a rule, excellent politicians, this type of men may gain control, and then the society merely serves to protect the very thing it was created to abolish. We can not create morals by force. Unless a surgeon has high ideals, merely keeping within the law does not make him a source of pride to his profession. His ideals must be high because of the inward joy and satisfaction this gives, and not from the fear of punitive measures nor for the hope of ostentatious rewards. True happiness, like the kingdom of heaven, is within us.

Finally, having chosen his ideal, the surgeon should constantly strive to attain it. It is impressive to see a character deteriorating. A surgeon who may have native ability may also have a turn for politics, or may be somewhat lazy and lack tenacity of purpose. He finds that being

a good "mixer" pays and he cultivates this talent, resolving that after a while he will be more earnest in his professional work. But he gives up more and more to his political talent and finally middle age creeps upon him. He may have been elected president of every society of which he is a member, but his chief concern has become medical politics, not scientific surgery. Or laziness, jealousy, carelessness may be the besetting sins which, when not suppressed, strangle what might have been a fine character. There is no more striking tragedy than this. There is no greater waster of time or consumer of energy than hatred, vengeance, a desire "to get even" for a real or fancied wrong. But if the surgeon's ideals are high and he manfully tries to attain them, these vices are kept under increasingly better control. It is a solemn thought that we do not stand still in building our characters. We are making either for better or for worse.

If a surgeon has but approximated these ideals, his career will be a life of satisfactory accomplishments, a noble example of citizenship, a true inspiration to his colleagues, and at the end he will

"Join the choir invisible
Of those immortal dead, who live again
In minds made better by their presence."

THE LIMITS OF ORTHOPEDIC SURGERY*

By Edward S. Hatch, M.D., F.A.C.S.,
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What are the limits of orthopedic surgery? Our specialty has grown and expanded tremendously during the last twenty-five years far beyond the dreams of its earlier workers. Many factors have contributed to its growth, but the writer feels that it is due principally to the steadily increasing number of medical men who are thinking in terms of function; who are looking forward to the end results in each case, and carrying out with great care and patience all the details that make for the best results.

In all communities, however, it seems fair to say that the general surgeons believe that we are encroaching more and more on their domain. Cases which have been considered general surgery are being treated by the orthopedic surgeons to a greater extent than ever before. This, we believe, is due to the fact that the general public is becoming more educated in surgical matters through newspaper and magazine articles and lectures, and are in many cases demanding orthopedic consultants of their family physician rather than general surgical consultants.

Apparently this attitude of the patients, from the echoes we hear of the last meeting of the American College of Surgeons, has put the general surgeons on the defensive, and they, I am sorry to learn, have not hesitated to speak slightingly of the surgical work done by orthopedic surgeons. There is certainly work enough for all, and in the final accounting let us see to it that the orthopedic surgeon measures up to the highest ideals of our profession.

To quote from the preface of Sir Robert Jones in his book on "Orthopedic Surgery of Injuries," "Nothing is more fatal to progress than when from defect of general surgical training a specialist is limited to one view of a subject. The orthopedic surgeon should be governed by sound surgical principles and not become entangled in detail. Function is his goal and he should know and be able to practice the best way of obtaining it. The operation means to him only the beginning of his problem, and his most brilliant operative exploit, unless directed to a functional success, should be a reproach."

Men who expect to specialize in orthopedic surgery should first spend several years in the general practice of medicine and should have a thorough surgical training. They should be very familiar with normal skiagraphic anatomy and should be well schooled in mechanics, in the details of manufacture of all types of deformity apparatus, as well as the designing of such apparatus. He must be a mechanic, a sur-

*Chairman's Address, Section on Orthopedic Surgery, Southern Medical Association, Fifteenth Annual Meeting, Hot Springs, Ark., Nov. 14-17, 1921.

geon and a roentgenologist before he attempts to limit his work to orthopedic surgery, and, as Dr. Baer says, must have patience, perseverance and optimism.

When a man is thus trained and is willing to devote himself to orthopedic surgery he will naturally ask himself, of what does my specialty consist? What cases have I a right to expect my confreres to refer to me? This will, of course, be governed to some extent by the locality in which the surgeon is situated and will vary according to what the doctors in that particular location consider orthopedics. At first he will be asked to see non-surgical cases only, but gradually the bone and joint work will come.

The amount of border-line work that comes to the orthopedic surgeon will be governed by his skill in handling the operative side, together with his accurate and careful work along mechanical lines that his orthopedic training has given him. The American Orthopedic Association, at their meeting in 1920, adopted the following resolution: "The scope of orthopedic surgery should include the frame work of the human body, the bones and joints and abnormalities of the motor apparatus. This would include:

"1. Congenital and acquired deformities of the spine and extremities.

"2. Infantile paralysis after the acute stage.

"3. The deformities of adult paralysis.

"4. Stiff alkylosed joints.

"5. Torticolis.

"6. Disabilities of joints such as rupture of crucial ligaments, injuries to the semilunar cartilages, snapping hip, slipping patella, fractures, etc.; he will be consulted in severe and complicated fractures and in diseases in and about joints."

It seems to the writer that the orthopedic surgeon should be asked to take charge of these cases early, as he would then be better able to prevent deformities and would get his patients up sooner. It is certainly unfair to both the orthopedic surgeon and the patient to have these cases sent to him after the deformity has taken place.

There are, of course, some general surgeons who are especially interested in bone and joint work, and their surgical training puts them in a position to treat these cases intelligently and well. And there are men who are limiting their work to orthopedic surgery who have not had a sufficiently long surgical training and who are not finished operators and are certainly less competent to do surgical orthopedics than the above-mentioned surgeon.

One of our most successful orthopedic surgeons feels "that if an orthopedic surgeon thinks that he is better qualified than a general surgeon to take these cases it is not due to the fact that he is an orthopedic surgeon, but because he has fitted himself for this special kind of bone work. Of course, primarily and fundamentally an orthopedic surgeon should be better able to take care of these cases than the general surgeon for the reason that he does so much in bone work."

He says: "What we as orthopedic surgeons should do, I believe, is to standardize the importance of orthopedic surgery and to recognize as orthopedic surgeons only those that have qualified under these standardizations." The training of the orthopedic surgeon would be to the patient's advantage in many complicated fracture cases. Many general surgeons have a prevailing indifference or dread in treating fractures and give very little attention to this class of cases, and when they do take charge of them do simply the operative procedure, leaving the equally important after-care to an assistant with the usual result. Dr. Estes believes that long usage and custom have made traumatic surgery a part of general surgery, but that young men should have more training both in colleges and hospitals in traumatic surgery, especially the treatment of fractures. The writer believes that this debated question will be settled only by time, the patient seeking those surgeons, be they general or orthopedic, who give them the best functional results.

The United States Public Health Service has appointed consultant orthopedic staffs and in my locality we are asked to pass on many fracture cases. Industrial plants will in time appoint orthopedic consultants also, and disabling conditions will then be recognized early and proper treatment can be begun at once to the advantage of the worker as well as the employer.

In our Orthopedic Clinic advice is constantly being sought by compensation insurance injury cases who have received inadequate treatment from the insurance surgeons. These are usually fractures, sprains and joint injuries, to which superficial treatment only has been given, and the patients realize that they are unable to resume their former occupations, though they have been discharged as cured by their doctor. Being unable to pay for service, they apply to the Orthopedic Clinic for relief instead of going to the general surgical clinic because they have learned that the orthopedic treatment helps them to get back to their work earlier.

It is only by doing the work that comes to us as carefully and conscientiously as we can that we can help to put our specialty on a high plane and keep it there. The day when the laity and the medical men thought of orthopedists as masseurs and brace-makers is past.

FRACTURES OF THE LOWER EXTREMITY OF THE RADIUS*

By Wm. T. Henderson, M.D., F.A.C.S., Mobile, Ala.

A very important reason for bringing this subject before the profession is the frequency of this fracture since the invention of the internal combustion engine, and secondly the reduction of this fracture and the application of a proper fitting splint.

It is quite well known that if this fracture is properly reduced a splint is unnecessary except for the comfort of the patient. But the hand must be held in the correct position until healing takes place in the annular ligament, injured by the dislocation of the ulna, and for this reason a proper fitting appliance is necessary to bring about the best results.

There are two fractures of the lower end of the radius which are of frequent occurrence, one known as Colle's fracture, which this famous surgeon failed to describe properly, and the other known as the reverse Colle's, in which the broken end of the bone is found upon the anterior surface of the radius. The latter is produced by falling upon the flexed hand while pronated, in contradistinction to the Colle's, where the end of the bone is found upon or inclines to the posterior surface of the radius. One is produced by over-flexion of the hand and the other by over-extension of the hand on the arm. There is a fracture of the lower end of the radius, known as chauffeur's fracture, which is also produced by indirect force, or over-extension of the hand on the arm. This has been erroneously described as being the result of direct force, as by the crank of the automobile, in back-firing, hitting the chauffeur on the back of the wrist. Such a thing is doubtless possible, but from my observation and information of the history of these cases they are produced by the chauffeur bearing down on the crank when the back-firing occurs, thus over-extending the hand on the arm while the arm is in the prone position. Fractures of the lower end of the radius may be comminuted as well as compound or impacted, but there is little difference in the character of the treatment when once reduction has taken place and the proper retaining splint has been put in position. The use of the splint which I recommend in these cases facilitates the treatment of the open wound in case of a compound fracture.

The typical Colle's fracture, as described by this surgeon places the line of fracture three-quarters to an inch above the radio-carpal joint. We make little distinction in the treatment of the case whether it is the epiphyseal end of the bone which has been separated or the fracture line is one-half inch above the joint. Reduction is first necessary under an anesthetic before we can hope to obviate the "silver-fork deformity," which is so often present in those who have recovered from an injury of this kind.

One of the most important things in the treatment of injuries of the lower extremity of the radius is first to ascertain whether or not a fracture exists. So many of these cases are passed up as sprains. They are really sprains, and too frequently sprain fractures, which are overlooked by the doctor only to leave, after healing takes place, a characteristic silver-fork deformity. For the purpose of diag-

*Read before the Staff of Providence Infirmary, Mobile, Ala., August 8, 1921.

nosing this condition I use a machinist's calipers; and where the distance between the styloid processes of the radius and ulna in the injured side is greater than the distance between the styloid processes of the radius and ulna in the opposite side, there is fracture. The great strength and the peculiar attachment of the carpo-radial ligament on the anterior surface of the wrist, the wedge-shaped arrangement of the carpal bones, especially the cuneiform, the scaphoid and the semi-lunar, which articulate with the radius and make the joint, the cancelous bony tissue in the lower end of the radius itself, all contribute their share toward producing a fracture in this location.

We have in the forearm two bones running parallel to each other and of approximately the same length, the lower end of the ulna articulating with the ulna notch near the lower end of the radius. Whenever we have a fracture of the lower end of the radius we have shortening of the radius, because the fracture is produced by a blow upon the palm of the hand, either from the crank of a gas engine, or by a fall upon the hand while it is in a prone position. And whenever you get shortening of the radius, the ulna must go somewhere. It goes inward, because a wedge is driven in between the radius and the ulna, and you get broadening of from one-quarter to three-quarters of an inch. And this can very readily be demonstrated by measurement with the calipers.

We desire especially to call the attention of the profession to this simple means of diagnosing a fracture that is too often not diagnosed. And we recommend that in every case where the distance between the styloid processes of the radius and the ulna in the injured hand is greater than

the distance in the well hand, that ether be given the patient and the impaction be broken up. It does not make any difference how slight the fracture may be. If there is any impaction there may be no crepitus and still the wrist by actual measurement is broader in the injured

arm, and if the radius is shortened the ulna, which articulates with the lower extremity of the radius, must go somewhere. The answer is, it goes inward. And when the ulna is driven inward (or toward the body when the arm is in the correct anatomical position) the wrist is broadened at the point of injury.

We are not suggesting the use of the calipers in lieu of the x-ray, or in any manner disparaging the value of the x-ray as a means of diagnosis in this class of fractures. But in localities where the x-ray is inaccessible we do recommend the calipers as a simple and accurate means of diagnosis.

There are several other signs of fracture of the lower end of the radius described in text books on fractures, and I do not want to ignore these symptoms, but so far as I have read there is no author who calls attention to the difference in measurements between the styloid processes of the radius and ulna in the different arms in fractures in this locality. Any fracture of the radius in which there is no displacement of any part necessarily would not be followed by any dislocation or displacement of the lower end of the ulna, and hence there would be no necessity for any treatment, as there would be no broadening of the wrist.

A most conspicuous sign of old fractures which have not been properly treated is the prominent protrusion of the end of the ulna when the hand is in the prone position. And, to recapitulate, where there is shortening of the radius, there is dislocation of the end of the ulna from the ulna cavity, and consequently broadening of the wrist. Then, broadening of the wrist following an injury means fracture and not sometimes a sprain for which it is so often treated by anterior and posterior splints. And I wish to emphasize again the importance of etherizing the patient, since too frequently a doctor is not strong enough to break the impaction which is too often present, because the natural resistance of the muscles have also to be overcome.

The proper application of a well-fitting splint, such as I exhibit here, is, I believe, the best method of bringing slight traction on the broken end of the radius and at the same time returning and retaining the end of the ulna in the cavity of the radius, which is made for its reception.

This appliance is made of plaster of Paris bandage, woven back and forward upon itself until the proper thickness is acquired. It is then removed from the even table on which it is made, just before it hardens, and is moulded to the particular arm for which it is intended. You will notice that the end is swept over the hand instead of being allowed to proceed straight. This "lucky curve" serves to retain the wrist in the pistol-shaped position, while the forearm is in a position midway between pronation and supination. It will also be noted that when the hand is bent laterally, or toward the ulna, when the forearm is in the mid-position, the end of the ulna at once falls into its cavity, thus allowing healing of the capsular ligament, which had been torn when the injury was received. This simple plaster splint prevents at once any movement in the supine or prone directions, thus retaining the end of the ulna in position, and at the same time lends itself admirably to considerable movement of the fingers, thus keeping free from involvement in the after-coming callus, the tendons on the flexor and extensor surface of the wrist.
259 *St. Francis St.*

PREPAREDNESS AGAINST CANCER

By Joseph C. Bloodgood, M.D.,
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Cancer Week.—During this period the medical profession under the direction of the American Society for the Control of Cancer proposes to disseminate correct information which every one should possess for his protection against death from cancer.

The Menace of Cancer.—This danger now needs no signal post. The majority of the adult population of this country knows that cancer is one of the most common causes of death in men and women. What is not known and should be known is that in many parts of the body cancer can be prevented, and in all parts it can be recognized so early after its beginning

that the present methods of treatment have, and will, accomplish a large number of cures.

Misinformation.—The general opinion of cancer is that it is a hopeless disease. This folk-lore impression is based upon the fact that the majority of people, when uninformed, seek treatment in the late and advanced stages, and it is quite true that any known treatment has cured but a very small per cent.

The educational movement by the medical profession is to correct this misinformation that cancer is a hopeless disease and rarely cured.

The medical profession is the guardian of the health of the people and when it possesses evidence that a disease formerly considered hopeless is in some instances preventable and in others curable, these facts should be given to the public.

As an example of misinformation the following may be cited. When I was playing golf recently in Mississippi, the ball was driven into a small ditch of water. The bare-footed colored boys tried to locate it with golf clubs. When it was suggested that they wade in and feel for the ball with their bare feet, the answer was:

"No, sir, lampreys are in this water, and when they bite you they kill you."

This was misinformation, and the question was how to correct it so the boys would understand and act accordingly at once. The answer was:

"Boys, if you have been told this, you are right to refuse to wade in these dangerous waters. But, boys, we, when students at the university, dissected lampreys. We handled them dead and alive; we gathered them ourselves from muddy waters; we were bitten. The bite of the lamprey is no more dangerous than the bite of a blood-sucker, and much less dangerous than the sting of a mosquito."

What was the result? The boys waded in whistling, found the ball and asked for no reward.

Correct Information.—The medical profession has made every effort to test the accuracy of the facts contained in the message to the people. We also have ample proof that if these facts are understood and acted on, the number of deaths from cancer will be greatly reduced.

What is Cancer?—Recently in Mississippi I was asked to address the young men and women teachers of a large normal school and found myself confronted with numerous children of the ages of seven to twelve. When I asked the president to let the children go and enjoy a recess, he replied: "They have come of their own accord to hear the lecture."

What can be said about cancer that children will understand? Help in this emergency came by remembering a conversation with my daughter, aged seven, who asked: "Father, how can you tell cancer?" I replied: "How can you tell your father and mother?" Answer: "Because I see them so often." Reply: "That is how doctors can tell cancer."

Question: "Father, why have you not removed the black mole on aunt's shoulder?" Answer: "Because it is the kind of a mole that does not become cancer; if it were, I would have removed it years ago." "Father, when are you going to take the mole off of my shoulder?" Answer: "Never, because it is the same kind of a mole as that on your aunt's shoulder."

"Father, Cousin ———— told me that you are going to remove the nodule on his face after he is twelve years of age. Why not do it now?" Answer: "It is not dangerous now, but after he is older, it is the kind that may become cancer. Therefore, it is safer to remove it before it becomes cancer."

Mushrooms and Cancer.—Children and every one should know that when some kinds of mushrooms are eaten, one becomes very ill and even may die. But when other mushrooms are eaten, no harm results—they are good and safe food. Therefore, when you want to eat mushrooms, you must find out from some one who knows what kinds are not dangerous.

Beginnings of Cancer.—Cancer never begins in a healthy spot. There is always something in this spot first that is not healthy, but is not cancer. Cancer may or may not begin in such a sore spot. Every one will be aware, by seeing or feeling, of this sore spot that may, like the mushroom, be harmless or dangerous.

Therefore, when any one becomes aware of such a sore spot, he should at once seek the advice of a medical practitioner and let him find out whether it is dangerous or harmless.

The beginnings of cancer are black moles, warts, scaly areas, sores, unhealed wounds on the skin or in the lining of the mouth; lumps or nodules which can be felt beneath the skin, as a rule not painful, or swelling or pain in a bone or joint. These beginnings are external and easily seen or felt. When the little sore spot is within the abdomen it can not be seen and is rarely felt. But every one with such a sore spot concealed within the abdominal cavity, or belly, will always receive a distinct message, because every part of the body is connected with the brain by nerves (wires); the sore spot irritates the nerves and the nerves carry the message to the brain. This message may be pain, discomfort, a sensation of heat or weight.

You feel something in a part of your abdomen which you never felt before. It may come and go. It may persist. The same message may give rise to indigestion, belching of gas, or even vomiting of food.

The sore spot may give warning of its presence by an unusual discharge, as a rule bloody.

These beginnings which we have described always give warning, but no one but a well trained doctor can distinguish between the one that is harmless and the one that may become cancer.

Examination First.—When any one becomes aware of any of these warnings the most important thing is to consult your medical adviser and request a thorough examination.

There is Always Hope.—In giving this correct information to the public we do not wish to take hope of a possible cure from any one who is suffering from cancer in an advanced stage and knows that he has delayed. The present methods of treatment have, in the past, accomplished cures, but the number has been relatively small.

The medical profession feels that the public must know for its own protection that the same methods of treatment in the early and less advanced stages of cancer promise a large per cent of cures and in many instances the individual, when he seeks advice early, may be fortunate in having a condition which is not yet cancer, and now cancer can be prevented.

CANCER OF THE MOUTH, A PREVENTABLE DISEASE

(Journal of the American Medical Association, July 16, 1921, Vol. 77, p. 220.)

Cancer of the lip, mouth and tongue always attacks men who use tobacco in excess, who have ragged, dirty teeth and never see a dentist. There is always a warning by a sore spot, a white patch, an area of irritation. Examination and treatment at once protect from cancer.

One of the large surgical clinics of this country has just completed a study of some 265 cases of areas on the tongue that were cancer and of areas that were not cancer. In the first decade, up to 1900, but one individual (3 per cent of the total) consulted this clinic for a sore on the tongue which was not cancer. In the third decade, from 1910 to 1920, 71 individuals, or 48 per cent, came for advice before cancer had started. Since the beginning of the fourth decade, 1920, 19 men, or 55 per cent, have, because of the educational movement, come under observation before the cancer had started.

Therefore, among 265 men who thought they had cancer of the tongue, in 105, or 40 per cent, protection from cancer has been accomplished by the dissemination of information only.

In the first decade up to 1900 there was but one man treated in whom the cancer was in its early stage, representing but 3 per cent of the total number, while in the fourth decade, since 1920, due to education, the number of early cases has increased from 3 to 23 per cent.

In this early stage treatment, that is, complete excision of the involved area of the tongue, has cured 62 per cent.

In advanced cancer the probability of a cure is not more than 12 per cent, and the number of these cases has fallen from 48 per cent in the first decade to 11 per cent in the fourth decade.

In the first decade 44 per cent of the men—due to ignorance of the danger of delay—came for treatment when the cancer had become hopeless. In the last decade there were 11 per cent of such cases.

This thirty years' experience gives definite evidence that cancer of the tongue is a preventable disease, that in the early

stages we cure 62 per cent, in the late 12 per cent.

The warnings of cancer of the tongue are definite and in the beginning they are not cancer. They are white patches, bad teeth, areas of irritation and ulcers.

The same is true of cancer of the lip, lining of the mouth and the gums about the teeth.

Any individual who is informed of these warnings, seeks immediate examination and has the cause removed, will be protected from cancer.

CANCER OF THE SKIN, A PREVENTABLE DISEASE

This form of cancer never begins in a healthy spot on the skin. There is always first a diseased spot which is not cancer—a black mole, a wart, scaly area, sore, unhealed wound, a burn, lump or nodule. Everyone knows of its presence. It can be seen and felt. It may have been present since birth. It may have just appeared. But, like the mushroom, no one but a good, experienced doctor can tell whether it is of the dangerous kind, and whether it should be removed. If it is of the dangerous kind, its proper removal will protect from cancer.

Should you consult a cancer quack who advertises that he cures cancer, he will call it cancer, no matter what it is. If it is not cancer, you will go through a painful procedure and have an ugly scar unnecessarily. If it should be cancer this treatment usually fails. If the treatment is in the hands of an experienced surgeon it should never fail, if it is early cancer.

There is no question that cancer of the skin is a preventable disease, and early cancer of the skin should invariably be cured, if the proper treatment is followed by an experienced surgeon.

CANCER OF THE BREAST

Every woman over twenty-five years of age should know that if she feels a lump in her breast her protection depends upon an immediate examination.

As yet we have no evidence that cancer of the breast is a preventable disease, but in the thirty years since its operative treatment was established by Halstead of Johns Hopkins, there is ample proof that a cancerous nodule in the breast operated upon immediately after its first discovery is usually curable in more than 70 per cent. If the woman delays until the low axillary glands are involved the per cent falls to 25, and when the highest glands are involved, it falls to 10.

In my own recent experience so many women are seeking advice at once after they feel the lump that I am able to give some very interesting and hopeful figures.

First, the woman may feel a lump, but on careful examination there is no lump, or the lump is indefinite or one of many indefinite lumps in both breasts, or there may be only slight enlargement in the breast tissue in the axilla, or there is only a slight discharge from the nipple. Operation is not indicated. These women run no more risk of cancer than any other woman of the same age.

Second, the lump which the woman felt is a definite lump. The operation should be performed at once. The lump is explored. If it is benign, the lump is removed and the breast saved. If it is cancer, the breast and the complete operation is done, and the woman's life is usually saved.

In the last few years among the women seeking examination at once, in almost 50 per cent nothing is found, or only indefinite lumps in both breasts, or discharge from the nipple. When the definite lump is found and explored in almost 50 per cent the lump is either a benign cyst, or an encapsulated adenoma. When the explored lump is found to be cancer, in almost 50 per cent of the cases the glands are not involved.

The great increase in the number of women who seek advice and in whose breasts after careful examination nothing is found, is entirely due to the educational movement.

The greatest increase of benign tumors when the lump is explored is undoubtedly due to the fact that the cyst is a disappearing tumor. In former years, when women waited, the cyst usually disappeared and only those with benign encapsulated adenoma and definite cancer came for treatment.

The increasing number of definite cancers without metastasis to the axilla is entirely due to earlier intervention.

Here we have definite evidence of the value of giving women correct information in regard to the danger of delay after they feel a lump.

Our better results today are not due to improvement in our operative treatment, but to the intelligent response of women who in one way or another receive this correct information.

CANCER OF THE UTERUS

In addressing a public audience of women, what should the doctor say about this disease which causes more than 12,000 deaths annually in this country?

In my opinion we should speak to the audience as we do to the individual in our consulting room in the presence of her family.

We are not yet certain, but the evidence strongly suggests that cancer of the cervix of the uterus (the most common form) is a preventable disease.

This form of cancer usually attacks women who have borne children and who therefore have had an examination and should not shun it.

In every woman after childbirth the injuries of labor should be immediately repaired, and she should submit to an examination by a competent obstetrician or gynecologist, or the doctor who attended her during childbirth, at regular intervals.

Every woman over twenty-five years of age who observes any change in her monthly periods, or any discharge (as a rule bloody) between the periods, or who after the change of life notices a recurrence of the periods of discharge, should seek examination at once.

Women should know that in the great majority of cases this warning is not cancer. It may be a condition that will never develop into cancer, or one that usually develops into cancer. In a few instances it may be the first warning of an early cancer.

Protection against cancer absolutely depends upon a careful examination. In some cases it may be necessary to go to the hospital for a minor operation which can be performed under very light gas or ether anesthesia. Pieces of tissue are removed from the cervix and examined under the microscope.

Should early cancer be revealed by the microscope the chances of a permanent cure are very large. At the present time there is some difference of opinion whether the treatment should be radium, or operation alone, or both. This must be decided by the gynecologist responsible for the treatment.

Cancer of the cervix very quickly infiltrates beyond the area that can be removed by operation. The operative cures of late cancer of the cervix are not more than 10 per cent.

The experience of the medical profession up to date seems to indicate that proper treatment with enough radium in the late stages of cancer of the cervix, offers a much larger probability of a cure than operation.

But no treatment can promise as much as the treatment applied the moment the examination is made immediately after the first warning.

The hope of reducing the number of deaths from cancer of the uterus in women depends chiefly on giving them this correct information, and their intelligent cooperation.

CANCER WITHIN THE STOMACH

The most common situation is the end of the stomach and the large intestine (the colon). Here is a local area or sore spot which is, or may develop into, cancer and is concealed. It is rarely felt as a lump, except in the late stages.

When one studies the recorded histories of individuals with cancer of the stomach or colon, one is impressed that, with few exceptions, everyone has been warned. But a complete examination has been delayed, often until it is too late.

Fortunately there is hopeful evidence. In a few clinics in the past ten years, and in many clinics in the past five years, many individuals have come for examination early, and at operation the number in which the cancer could be removed with a large insurance of a cure, is increasing rapidly.

In former years no one was cured of cancer of the stomach or colon unless by some fortunate accident the growth had produced obstruction at the pylorus, or in the colon, and the symptom of vomiting

was so urgent that they came immediately for operative relief.

Unfortunately obstruction is a variable possibility and it is as often late as it is early in the course of the disease.

The other warnings are just as definite, but not as urgent. Unfortunately, they do not differ from the warnings of diseases within the abdomen that are not cancer and never will be cancer. But like the mushroom, no one except an experienced diagnostician after careful examination, always with the aid of the x-rays, can determine it.

Indigestion, belching of gas, discomfort within the abdomen, even pain and occasional vomiting, tenderness, unexplained diarrhea and constipation are such common experiences of adult life and usually pass away with or without treatment, that the majority of individuals, uninformed and ignorant of the dangers, delay, take domestic remedies, buy patent medicine, or demand treatment of their physician without examination.

It is the object of this renewed intensive educational campaign to bring this correct information to a larger number of people with the hope that they will understand it and when their warnings come, seek and demand an immediate and thorough examination.

We have ample evidence that many have already done this, and have been or will be cured of cancer of the stomach or colon, which was revealed in such an early stage that it could be completely removed.

The danger of removing a portion of the stomach or colon if the cancerous mass is in the early stages of its growth, is very, very small, while the hope of a cure is very large.

CANCER OF BONE

The chief message to the public is the importance of an immediate x-ray. The laity are educated to have an x-ray taken after a fracture, but not after a bruise to a bone or joint.

The warnings of diseases of bone are local pain, swelling, a limp, or impaired function. Now is the time for an immediate x-ray.

As diseases of bone produce either bone destruction or bone formation, the x-ray at the very onset pictures the beginnings of the disease.

The advantage of immediate examination after any of the warnings mentioned is that this offers the only hope of increasing the number of cures of sarcoma of bone, whether the treatment is amputation, resection, radium or x-rays.

In the *Journal of Radiology* for March, 1920 and in other papers, the references to which are given in the SOUTHERN MEDICAL JOURNAL for December, 1920 (vol. 13, p. 987), I have recorded that amputation for periosteal sarcoma had accomplished but two cures, less than 4 per cent, and the results after amputation for central sarcoma are about 8 per cent.

What the results will be when we are able to apply our treatment earlier, is only conjecture, as up to the present time there are only very few early cases.

The new and important fact for the profession to know in regard to lesions of bone are, that when the public is educated and seeks advice immediately after the first warning, the x-ray will reveal both periosteal and central lesions which in the past have rarely or never been seen, because these diseases came to spontaneous recovery and when the patient delayed, the medical profession was given no opportunity to examine them clinically or with the x-ray.

Again, sarcoma of bone is rare, while the benign lesions, the bone cyst, the central giant-cell tumor, the myxoma, the chondroma, the various types of exostosis and ossifying periostitis, tuberculosis and osteomyelitis, are common, and these benign lesions in their early stages are difficult to distinguish from the malignant.

For this reason the past records of cures by amputation for sarcoma of bone have incorrectly recorded a larger per cent of cures, due to incorrect diagnosis. For example, in 1899 an American report claimed 49 per cent of cures after amputation.

The same difficulty of differential diagnosis in recent years may explain some of the cures by x-ray or radium and the toxins treatment.

Therefore, in view of the greater difficulties of diagnosis in the early stage, in view of the possibility that it may be a periosteal or central lesion of the type which recovers spontaneously, or of the benign type which can be cured without amputation, and in view of the fact that up

to the present time amputation has accomplished but a small per cent of cures, the surgeon, the roentgenologist and the pathologist should make every effort to establish at once a certain diagnosis before proceeding with any mutilating treatment such as amputation.

The details of the diagnostic procedure are given in the papers referred to.

CONCLUSIONS

The educational campaign to inform the public in regard to the early warnings of things that may be cancer, has been going on for some years and was intensified during Cancer Week, and undoubtedly will be followed up by a continuous educational movement.

There seems no question that the public must be informed on preventive medicine and also that our methods of treatment promise better results if applied early, and these methods of treatment cannot be applied early unless the people are informed. The uninformed individual rarely if ever, seeks advice in the early period. When the disease is one from which the public cannot be protected, as from typhoid fever, it must receive education on the earliest signs and symptoms.

We already have evidence of the intelligent response of the people to this correct information, and we have positive proof of the better results. But also we have ample evidence that it has increased the difficulties of diagnosis.

Diseases which heretofore we have rarely seen, because they recovered spontaneously, are becoming common. All lesions of the same tissue in the same locality when left alone tend, as time goes on, to differentiate themselves, so that diagnosis is not difficult. It is minor diagnosis and major treatment. The same lesions in the early stages are not so differentiated, and we are confronted with major diagnosis and minor treatment.

The medical profession must prepare itself for these difficulties in diagnosis, and also for the larger responsibility of treatment.

First, there is the danger of diagnosing malignancy and performing a mutilating operation when there is no malignancy. Second, there is the greater danger of diagnosing benignity, when there is really malignancy in its early stage, and either delaying treatment, or performing an incomplete removal.

Incomplete removal of malignant disease is the worst treatment possible.

Then, again, there is the danger of diagnosing early malignancy and treating the lesion incorrectly. For example, choosing radium instead of excision, when the latter offers most, or, when excision is chosen, removing too small an area.

In this country the technic of surgery is good and equal to the treatment of malignant disease in its late stages. But the diagnosis of the same disease in its early stage, is by no means as developed as the operative technic.

As technicians we can find no fault with our colleagues using radium and x-rays, but we can with their judgment as to its application. The same can be said of operators who choose operation when x-rays and radium offer more. This is probably now true in cancer of the cervix, in myoma with hemorrhage, frequent curetting for uterine bleeding when one application of x-rays or radium will check the bleeding; in extensive operations for Hodgkins' and lymphosarcoma when we know that surgery offers nothing and x-ray and radium more. How much more, we do not yet know. Complete excision of the upper jaw for malignant disease with the knife has no recorded cures to justify its continuance.

There is much surgery done with the knife that should be done with the cautery.

We are on the threshold of interpreting our evidence as to the combination of attack with the x-rays, radium, knife, cautery.

The fault is not with individuals throughout the country, but with the great clinics who have the material and the records, which, if carefully analyzed and placed in the literature would be most helpful in an intelligent attack on malignant disease after a more or less assured diagnosis.

In many great clinics this material lies dormant like gold in a vault, ready for circulation. There is demand for it. The question is how to get this dormant material of life-saving facts in print and accessible for our combined study and attempts to reduce the number of deaths from malignant disease.

EYE, EAR, NOSE AND THROAT

OUR SPECIALTY AND GENERAL MEDICINE*

By W. T. Patton, M.D.,
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The older men of our specialty and those who have its best interest at heart all admit the close relationship of any special branch of medicine, especially that of the ear, nose and throat, to general medicine, yet many allow the practice of their specialty to dominate them completely, to the exclusion of many things that broaden and tend to make better physicians. This is sure to invite professional deterioration and exclusion from the highest concepts of profession.

There seems to be a growing tendency to make diagnoses and treat conditions by what is seen through the little opening in the head mirror, forgetting that each part of the human anatomy is intimately associated with each and every other part of the body, that each organ depends upon the other organs' proper functioning.

This tendency of limiting our field of diagnosis is growing rapidly of late, due to the fact that many post-graduate schools advertise six weeks' courses, and some actually give diplomas to men in that incredibly short time, signifying that they are qualified to be known as specialists.

This stands out more markedly in America, because while the specialty originated across the ocean, it has on the new continent assumed the proportion of a hot house growth, and here one city alone may be found enjoying the doubtful privilege derived from a number of so-called oto-laryngological specialists, totaling not far from as many as there are to be found throughout the British Isles.

As an explanation we may adopt the words of the "Report of Committee in Oto-Laryngology, A. M. A., 1921": "Oto-Laryngology has too long served as a catch basin for the derelicts in general medicine, who have acquired a little dabbling knowledge in our specialty which will enable them to do some operative work of doubtful value to the patient, and too often on the basis of this to renounce their general practice and become spurious oto-laryngologists."

It is wise at this point to remind ourselves of the words of Sir Andrew MacPhail: "Medicine is the only profession that shows any concern for the further education of its graduates. Upon a given day the graduate may profess that he has acquired the mystery, but no one believes him. There is a great gulf fixed between knowing a thing and professing to know it, and a still wider gulf between knowing and doing of it. Study of medicine must continue as long as life endures." This is particularly true of our specialty, and there should be control over the assumption of the title of specialist in oto-laryngology and certain definite qualifications demanded. In the closing words of an article by Dr. D. J. Wishard, "For the United States and Canada we need means by which specialists may be labeled to the public, to the universities and hospitals requiring to make appointments to their staffs as reasonably trained." The writer will not enter into just what these requirements should be, since at a joint meeting of the representatives of the A. M. A. and special societies recently held a joint resolution was prepared embracing all the important suggestions. This resolution was adopted by the three special societies and sent on to the A. M. A.

Now let us pause a few moments to consider the close relationship of our specialty to general medicine. The so-called headaches are a large subject and of great interest to us as specialists. Under this heading we will consider neuralgia, hemicrania or migraine. Headaches may be divided into those of toxic origin, nervous headaches, those from brain tumors, or other cerebral conditions, those from errors of refraction, and those of nasal origin. Black roughly gives percentage of

*Chairman's Address, Section on Eye, Ear, Nose and Throat, Southern Medical Association, Fifteenth Annual Meeting, Hot Springs, Ark., Nov. 14-17, 1921.

causes of headaches as follows: Diseases of eye, 30 per cent; intestinal, gall-bladder and stomach trouble, 25 per cent; nasal disease, 20 per cent; nervous disease, neurasthenia, hereditary predisposition, miscellaneous nerve diseases, 10 per cent; the remaining 15 per cent are genito-urinary (including kidneys), uterine, syphilis, circulatory, anemias, thyroids, tonsils, ears, bad teeth and metallic poisoning. Space forbids going into each of these causes and the diagnosis, yet it can be readily seen that a great many conditions could act indirectly upon the nose, throat and ears, thereby causing the headaches, and yet the special organs be not at fault. Hence it becomes urgent in all cases referred to us for a diagnosis as to whether the ear, nose or throat is the cause of the trouble to enter into careful consideration of all other causes over the body before blaming some part of our special domain.

Next let us consider the large subject of focal infection. The subject of focal infection is another large and very interesting one and closely allied to our specialty. Such conditions as arthritis, endocarditis, pericarditis, myocarditis, gastritis, myocardial degeneration, chorea, chronic and acute nephritis, exophthalmic goitre and many other conditions are now proven to be ophthalmic goitre and many other conditions are found in the head, yet we can safely say, including teeth, sinuses, ears and tonsils certainly between 80 and 90 per cent. This forms a very large field for study and we should work carefully in conjunction with the internist and the dentist to decide just where the foci of infection lies. Thus we may clear up a great many obscure conditions.

The tonsils and other members of Waldeyers' ring are the seat of a large percentage of focal infection, yet it is sometimes difficult to decide that they are absolutely the cause. Often we have removed innocent looking tonsils and been surprised to find deep seated abscesses and pockets of retained pus, and have been very much gratified to see obstinate cases of arthritis and other conditions clear up. The writer may be considered too radical, yet he thinks that where no other foci can be found, the tonsils, even though they show little or no trouble should be removed. In his early practice he often removed tonsils against his own judgment at the urgent request of the internist, and in almost all cases marked improvement followed. The tonsils have been blamed for so many morbid conditions that the writer, although often refusing to remove tonsils, feels that all tonsils are better out.

The accessory sinuses are the next most frequent location of focal infection. Here much careful observation and study are necessary before we can say the sinuses are or are not at fault. The clear-cut cases where we can see pus coming from the region of the sinuses rarely give us real trouble, but where there are very few symptoms and no visible pus we are often called upon to locate the focal infection. The nose and paranasal sinuses bring us into close relation to the ophthalmologist, making it necessary to study and examine in detail the nose and paranasal sinuses in all eye conditions for which they may be responsible, including conjunctivitis, lacrymal sac conditions, orbital cellulitis and abscess, corneal ulceration, iritis and its associates, maturing cataract, retinal hemorrhage, retinal detachment, optic neuritis, optic atrophy, paralysis of the third, fourth and sixth nerves, glaucoma, reduction of vision, diminution of the field, and functional disturbances not otherwise explained. It would be most interesting to go into how each of these conditions are caused through the nose and sinuses. This would necessarily make a very long paper in itself, and certainly the writer does not intend to take advantage of the Chairman's address to use more time than is allotted to the other papers.

We have all seen cases of bronchitis, obstinate coughs, a number of gastric disorders clear up with the proper treatment of the nose and throat. Thyroid conditions are now supposed to be closely associated with the disease of the tonsils.

Our knowledge of the internal ear should cause the internist to consult us more frequently as to the causes of vertigo; the syphilologist for early detection of involvement of the central nervous system; the neurologist for accurate data concerning the degree of function of the eighth nerve; the general surgeon to differen-

tiate vertigo accompanied by vomiting from intra-abdominal lesions; and the brain surgeon to aid in localization of the inter-cranial lesions. All vertigo is caused by a disturbance of the ear mechanism. The disturbance may be either local or remote. According to Jones the causes of vertigo may be grouped under five headings:

1. Involvement of the ear mechanism by a lesion in the ear itself.

2. Involvement of the ear mechanism by a lesion affecting the intracranial pathways from the ear.

3. Involvement of the ear mechanism by ocular disturbance, either through the eye muscle nuclei or through association fibres.

4. Involvement of the ear mechanism by cardio-vascular disturbance.

5. Involvement of the ear mechanism by toxemias from any organ or part of the body.

In a recent article by Dr. Charles Gluck, published in the *Medical Review of Reviews*, he states: "It can safely be said that we will ultimately be treating multitudes of the common infectious diseases principally by proper attention to the adenoids and tonsils, nasal septum and accessory cavities. This is especially true of the earliest stages and milder forms of tuberculosis. Conditions of under weight, under development, most ordinary anemias, almost all ordinary ear diseases, bronchial, laryngeal, constitutional infections of certain types, such as rheumatic, etc., accessory sinus disease, nasal diseases of an infectious nature, many pulmonary bronchial, pleuritic, cardio-vascular and infectious diseases should all be considered and treated from the standpoint of the ear, nose and throat."

With the new fields of bronchoscopy and esophagoscopy we are again brought into close relation to the internist and should be called upon to assist in making diagnosis and treating a number of chest and gastric conditions.

Certainly when we consider that practically all that constitutes modern oto-laryngology has been produced during the life-time of men still living, we are filled with pride at the development of our specialty. When we contrast the condition of oto-laryngology even so recently as thirty years ago with the stupendous development shown in the various fields of this specialty today, we are filled with amazement at what has been accomplished and with wonder as to what the future may have in store.

DILATION OF THE PHARYNX AS A MEANS OF RELIEVING DYSPHAGIA IN TONSILLITIS, PERITONSILLAR ABSCESS AND POST - OPERATIVE TONSILLECTOMIES

By Frederick Emerson Hasty, M.D.,
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There is perhaps not enough attention given to the importance of keeping the liquid intake and content of the body as nearly as possible to normal in the treatment of infections and post-operative surgical cases of the throat, nor to the ways by which this may be done. It should be remembered that as the severity of the inflammatory process or post-operative reaction increases, the amount of systemic toxemia is also being increased, and that at the same time the liquid content of the body, due to the pain and discomfort incident to swallowing, is being decreased.

I believe the severity of the systemic complications of infective processes in the throat is due not only to the virulence of the infective organism, but also, and perhaps to a greater extent, to the concentration of the organism or its toxins in the blood stream, and that the concentration is largely dependent on the amount of liquids passing through the body. While house surgeon at the Manhattan Eye, Ear and Throat Hospital, I ordered a complete urinalysis on a number of patients suffering from severe inflammatory conditions of the throat. Although I do not have records of these cases, I do remember being very much impressed with the frequency of albumen, and in some instances evidence of acidosis. These findings were

due, of course, to the disturbed body metabolism. I treated these patients by encouraging them to drink as much liquid as possible, and by giving them sodium bicarbonate and glucose by the Murphy drip.

To assist Nature in combating and eliminating this systemic toxemia, we must make it possible for the patient to swallow with a reasonable degree of comfort. Deglutition may be made less painful by the local application of drugs, which, because of their effects, are at best disagreeable, and many of which will destroy the appetite.

Sir St. Clair Thomson quotes a method suggested by Hovell as follows:

"A nurse stands behind the head of the patient and firmly applies the palms of the hands over the ears, and then behind the angles of the jaws. If she makes strong pressure at the moment that the bolus of food enters the pharynx the pain of its transit to the esophagus will be considerably decreased."

Sanger also writes on this subject. He says:

"A method which I have employed to accomplish this end (viz., relief from dysphagia), which makes full fluid intake not only possible but comparatively comfortable, is to place a full tumbler of the fluid to be taken in the patient's hand; then standing behind the patient to grasp each side of the head with the two hands encircling the ears, taking care not to press upon the neck behind the angle of the jaw, which is usually painful, then raise the patient up, directing him to drink at the same time that he is being raised. The relief that is afforded by this procedure is most marked, even in those extremely painful cases in which the peri-tonsillar tissue is involved."

I find, however, that to follow Sanger's method requires considerable strength in the arm of the operator and a certain amount of skill on his part, since the region below the angle of the jaws immediately external to the area of inflammation is very sensitive and slight pressure here may cause so much pain that the patient will lose confidence in the whole procedure. While Sanger suggested pressure both before and behind the ear, I have observed that pressure in front of the ear only is necessary, and in my experience I have met with considerable difficulty in instructing nurses and relatives how successfully to follow this technique. This method, moreover, can not be used by the patient alone. The assistance of another person is necessary.

I have devised a mechanical appliance which solves most, if not all, of the swallowing problems of tonsillar infections and post-operative tonsillectomies. In less than one minute this device can be attached to the head of a bed or to a chair.

DESCRIPTION

1. Block of wood $1\frac{1}{2}$" x $2\frac{1}{2}$" x $1\frac{1}{4}$" x $\frac{1}{4}$".
2. Corrugated rubber pad.
3. Steel bar $\frac{1}{8}$" x $\frac{1}{2}$".
4. Pulley 2".
5. Automatic lock which holds the No. 5 sash cord at any point.
6. Small cord attached to lever on lock.
7. No. 5 sash cord.
8. Piping $\frac{1}{4}$".
9. 10" arm.
10. Attachment for bed or chair.
11. By pulling on this cord with his right hand the patient can produce the proper amount of suspension.
12. A slight pull with the left hand on this cord releases the grasp of the lock and the appliance is swung back over the head of the bed.

When not in use the grasping fixture can be swung to one side out of the way and yet in easy reach of the patient when he again needs it.

The various steps in the adjustment and use of the apparatus are as follows: first, the patient should sit upright in bed, or in a chair, with his head inclined slightly forward as the appliance is being placed; second, the grasping pieces are put one on each side of the face with the upper end of the wooden block even with the lower margin of the outer side of the angle of the jaw, being so placed as to pass upward about a quarter of an inch in front of the external auditory canal; third, when once properly adjusted, the grasping appliance is held in position with the patient's left hand, while with his right he pulls on the cord, keeping his head erect or perhaps slightly inclined forward; he will soon discover how much suspension he should produce in order to avoid pain; fourth, the patient should be sure that he has made proper suspension before trying to swallow; also he should make two swallowing attempts after it seems that all substance has passed into the esophagus. Once beginning to swallow, he should continue absolutely in the normal way, because large and continuous mouthfuls are less painful. Fifth, for the patient to release the grasp he has only to pull on the small cord.

The explanation of the results obtained in this procedure is that it places the pharynx in line with the first part of the esophagus; that by raising the jaw it allows a freer movement of the structures in the neck; that by the elevation of the soft tissues passing over the angle of the jaw a lateral traction is made upon the walls of the pharynx, and especially of the fauces; and that, due to the lateral traction and position of the jaw, the body of the tongue is somewhat depressed and all of the structures of the pharyngeal wall are more or less fixed in the position producing maximum dilatation of the pharynx.

Certain merits of the appliance are that, first, it relieves practically all discomfort in swallowing liquids, semi-solids, and in fact some solids, for it allows considerable mastication. Moreover, the patient can use this apparatus without the assistance of a second person and yet have both hands free while eating. Then, having once used the throat in taking a meal, he is more likely to continue to eat. Again, by the keeping up of the liquid content, the systemic toxemia is decreased and complications are thus made less liable. And last, the mere fact that the patient is enabled to swallow has a very wholesome psychic effect.

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MEDICAL EDUCATION

CORRELATION IN THE TEACHING OF DENTISTRY AND MEDICINE*

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"We have come to see in the last few years that dentistry is a branch of medicine of the same dignity and importance as pediatrics, obstetrics, gynecology, or any other specialty. . . . The new school of medicine will, it is hoped, undertake to place training in dentistry on the same academic and scientific level as training in medicine and surgery." These remarks, made by Mr. Abraham Flexner, Secretary of the General Education Board, in June, 1920, at the announcement of the establishment of the new schools of medicine and dentistry at the University of Rochester, have a pertinent bearing on the relationship of medicine and dentistry that is becoming recognized today in our professional schools as well as in our clinical practice.

We are all well aware of the striking changes that have occurred in the past fifteen years in the teaching of medicine. In 1906, there were 162 medical schools in the United States. Of these 162 schools, thirty were organic departments of universities, forty-eight had university affiliation, while eighty-four were privately owned. In 1920, there were but eighty-five medical schools,[1] due to the discontinuance of some schools and the merger of others. Along with this reduction in numbers has been the effort to establish the control of medical education in the universities, and to raise the entrance requirements, first to one year, then to two years of college work. Of these eighty-five medical schools, sixty-six or 77 per cent are classified as university departments.[2]

It should interest physicians to realize that the same general movement toward university control shown by the medical schools has also taken place in the schools devoted to the teaching of dentistry. Of the forty-seven dental schools now in existence in the United States, eight were originally established as organic parts of universities, while thirty-nine were privately owned or affiliated with universities. Today we note that thirty-one dental schools are organic departments of universities, while sixteen are privately owned or affiliated. The following table, from the address of President Black[3] at the last meeting of the American Institute of Dental Teachers, shows in a graphic manner the development of university dental schools to the gradual exclusion of the privately owned dental institution.

TABLE 1. SHOWING THE NUMBER OF DENTAL SCHOOLS IN THE UNITED STATES, WITH THEIR STATUS AT THE CLOSE OF EACH TEN-YEAR PERIOD.

	Private or affiliated	University Department	Total Schools
1840	1	0	1
1850	2	0	2
1860	3	0	3
1870	8	1	9
1880	12	5	17
1890	21	11	32
1900	41	14	55
1910	32	23	55
1920	16*	31	47

*Of these 16 schools, two are affiliated and 14 are privately owned.

From this table it is apparent that 66 per cent of the dental schools in the United States are now under full university control, as compared with 77 per cent of the medical schools.

Of the 162 medical schools existing in 1906, only four required premedical college work for matriculation. In 1920, seven-

*Chairman's Address, Conference on Medical Education, Southern Medical Association, Hot Springs, Ark., Nov. 14-17, 1921.

ty-nine schools, out of a total of eighty-five, required two or more years in liberal arts for admission to the study of medicine. Up to the present, the majority of dental schools have required only four years of high school education as a prerequisite for matriculation. A significant advance is seen, however, in the fact that fifteen dental schools in the United States and Canada, beginning with the present session of 1921-22, are requiring one predental college year.

In 1905, the Council on Medical Education adopted an "ideal standard" for medical education in which the medical schools were urged to require for admission one year of college work, including courses in physics, chemistry and biology. Now, in 1920, we find 92 per cent of the eighty-five medical schools demanding, not one year, but two years in liberal arts. Since January 1, 1918, this requirement of two premedical college years has been an essential for a class-A rating of schools of medicine.

A recent classification of the dental schools in the United States showed that out of a total of forty-seven schools only nineteen were class-A institutions. Of these nineteen class-A dental schools, all but two are associated with schools of medicine. Only two of these class-A dental institutions are located in the South, the School of Dentistry of the Medical College of Virginia, in Richmond, and the School of Dentistry of Vanderbilt University, in Nashville.

It is quite evident that a distinct advance is taking place in dental education in every way comparable to the increasing requirements of the schools of medicine. The important role of dentistry in the prophylaxis and treatment of many systemic disorders having their primary focus in infection about the teeth has become very obvious in recent years.[4] This recognition of the grave dangers attending alveolar infections has not only emphasized in a striking manner the crying need for skillful and competent dental technic, but has served to elevate the practice of dentistry from a largely mechanical profession to a true specialty of medicine, comparable in dignity and importance to that of the ophthalmologist, laryngologist or otologist.

This changed status has been realized by none more promptly than by the members of the dental profession, and a perusal of current dental literature discloses the keen responsibility that the dentists feel in both the prophylaxis and correct treatment of mouth infections.

To many minds there comes a feeling of pity akin to sorrow that dentistry was ever separated from medicine. At one time the two professions were united and, while Harris and Hayden, in 1839, may have had good reasons to withdraw from the medical faculty of the University of Maryland to found the first dental school in this country, the present sentiment on the relation of dentistry and medicine all make for their reunion.

Just as the Council on Medical Education proposed its "ideal standard" in 1905, so the various dental organizations are now engaged in discussions of ideals in dental school requirements. It is very evident that progress is being made, but it is equally evident that there is a hesitancy in advocating the same standards for dentistry as for medicine. If it has been demonstrated, however, that dentistry is really a specialty of medicine on a full and equal footing with rhinology and laryngology, for instance, why should not the standards of the competent dentist be equal to those of the properly trained nose and throat specialist? As a matter of fact, there is, and can be, no distinction between them in their important services and contributions to medicine in general. That there has been a distinction in the past is

obvious. This has been due in part to the ignorance and aloofness of the medical man as regards dental practice, but in a definite measure it has also been due to the visionless dentist who saw only a mechanical proposition in the mouths of his patients. Now, this is all changed. The physician makes urgent calls on the dentist for real aid in preventing and treating many bodily ills, and the dentist is beginning to employ technicians to do much of the mechanical work, leaving him relatively free to study and solve the bigger problems of the relation between mouth infections and the general health. "I can not see," said a Boston dentist recently, "why a dentist, educated to take care of the mouth and do all the dental work necessary in that mouth from a surgeon's standpoint, should make and put in plates or do any of the laboratory work any more than I can see any sense in the proposition that an oculist who removes an eye and prepares the socket for a glass eye should, in his own laboratory, make the glass eye for the patient."

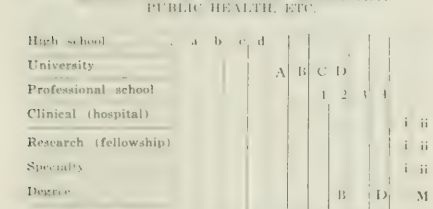
There are a great many members of the dental profession who firmly believe that the dentist should have an M.D. degree before he can properly qualify as a dental practitioner. Very many medical men—and their number is increasing—also take the same stand. This question has been discussed in numerous organizations and in several of our states. Regardless of this important question of the degree, the more essential fact stands out that the dental practitioner should have the same educational advantages and meet the same pedagogical requirements as the medical practitioner or surgical specialist. To this end, "ideals" must be established and gradually enforced. As has been pointed out in the earlier part of this address, there is a strong tendency toward university affiliation and control on the part of many medical and dental schools. The independent schools, many of which have done really excellent teaching, judged by standards of the past, are fast disappearing, and the near future will undoubtedly witness all teaching of medicine and dentistry under the complete control of the large universities that are already heavily endowed or adequately supported by the state. When this ideal situation is attained it is earnestly to be hoped that the primary and secondary schools in the country can be so ordained that the reasonably adept pupil may enter high school in his fourteenth year. Under such circumstances he could enter college or the university certainly by the age of eighteen years. After two years of academic work, but with continued university standing, he should be able to enter the school of medicine at the age of twenty. There is every reason to insist that his first two years of medicine, consisting almost entirely of the sciences and laboratory work, should entitle him to the degree of Bachelor of Science at the age of twenty-two. The next two years should permit of properly chosen "elective" courses, already in vogue in some of the very best medical schools in this country. These elective courses, properly selected, may lead at the age of twenty-four to the degree of Doctor of Medicine, Doctor of Dental Surgery, Doctor of Public Health, etc. In such a scheme there should be no distinction or discrimination in the instruction of the dental student, which has been justly criticised under present conditions, in the first two years of the professional course.

Finally, after securing his doctor's degree in his twenty-fourth year, the student should be encouraged to continue his training for one or, preferably, two years as an intern or assistant clinician in a qualified hospital, or else accept a fellowship

in a specialty of medicine or dentistry leading to a further degree of Master of Science in the particular branch he selects.

In Table 2, slightly modified from similar charts that have appeared from time to time on this subject, the course of the professional student is indicated from his high school years to the completion of his schooling in his twenty-sixth year.

TABLE II. IDEAL CORRELATION OF PROFESSIONAL EDUCATION IN MEDICINE, DENTISTRY, PUBLIC HEALTH, ETC.



In this table the letters a, b, c, d represent high school years; the letters A, B, C, D represent college or university years, the figures 1, 2, 3, 4 represent years in the professional school; the Roman figures i and ii represent years devoted to clinical work in the hospital, or years devoted to research work or particular training in a specialty of medicine. Under proper university control, the Bachelor's degree could be granted at the completion of the fourth year of college work and the Doctor's degree (medicine, dentistry, public health, etc.) at the completion of the fourth year of work in the professional school. Finally, as a proper reward for two additional years of study, the Master's degree could be earned; e. g., M. S. in ophthalmology, pediatrics, public health, oral surgery, orthodontia, etc.

In conclusion, it is reiterated that dentistry is a branch of medicine of equal importance and dignity with any other specialty of medicine or surgery. Our dental schools, following close upon the advances in medical education, should have the same standards and requirements already adopted, or to be adopted, by the schools of medicine. The dental practitioner, by the proper employment of laboratory technicians, should devote more of his time and skill to the great problem of oral sepsis in its important bearing on the general health. Finally, the professional student in medicine, dentistry, public health and other related specialties should be able to secure his Bachelor's degree and later his Doctor's degree, and then have the proper incentive to pursue graduate studies for a subsequent Master's degree in his special chosen field. The educational system should be so ordained and adjusted, from the primary grades through the professional school, that the average student shall have completed his professional education and graduate training by his twenty-sixth year.

REFERENCES

1. In 1921 this number has been reduced to 83 medical schools.

2. N. P. Colwell: "Improvements in Medical Education in Sixteen Years." Am. Med. Assoc. Bull., Education Number, 1920:14:10.

3. A. D. Black: "Progress in Dental Education." Proceedings of the 28th Annual Meeting of the American Institute of Dental Teachers, 1921, pp. 14-25. The tabulation here given is modified by the exclusion of the one Canadian school given in Dr. Black's table.

4. For an excellent resume on this subject see article by Dr. L. F. Barker, "Oral Sepsis and Internal Medicine," Journal of Dental Research, 1920:2:43.

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DR. M. Y. DABNEY, Editor
C. P. LORANZ, Secretary-Manager

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EDITORIAL DEPARTMENT

VALEDICTORY AS SECRETARY-EDITOR

It was with great regret that my resignation as Secretary-Treasurer of the Southern Medical Association and as Editor of the SOUTHERN MEDICAL JOURNAL was tendered at the Hot Springs meeting. I recognize the fact that the outstanding work of my life has been to aid in the upbuilding of the Southern Medical Association, and the greatest privilege that I have enjoyed in all my professional relations has been the contact with the progressive physicians in the sixteen Southern states in so worthy a cause as the advancement of medicine and surgery and the promotion of public health activities in the South.

The realization that one's efforts are appreciated brings joy to the heart of the person who is striving to accomplish something and the many evidences that I have had of the esteem and friendship of the physicians of the South fill me with pride, though I am humbled with the realization that I am given credit for much that I do not deserve.

For several years my professional duties have been such that I have given very little time to the Association and JOURNAL. For two years during my Army service the work was carried on entirely without even a suggestion from me, and I know that without any help from me the well-oiled machinery of the Southern Medical Association and its JOURNAL will continue to move "without slipping a cog." Not only that; Mr. Loranz, Secretary-Manager, and Dr. Dabney, Editor, will have the same hearty co-operation that I have had from the members of the Southern Medical Association, who are united in their enthusiasm for their favorite medical organization. The Southern Medical Association passed the experimental stage many years ago; and though now accomplishing much for the medical profession in the South, it is but at the dawn of its usefulness.

The Southern Medical Association will not miss me as Secretary-Editor, but I shall cease to enjoy the privileges that the position has brought to me. I have resigned to devote my entire activities to practice of the branch of medicine for which my training best fits me, and for the reason that the demands of patients leave me no time for Association work. It is also only through the practice of my profession that I can hope for the financial independence that every man should attain before the declining years come.

I shall always hold as among my most cherished possessions the friendships that have come to me while serving as the executive officer of the Southern Medical Association; and feeling as I do that the Association has done much more for me than I have for it, I am overwhelmed with gratitude on being promoted to the position which in my opinion is the greatest honor that can come to a physician in the South. During the coming year I shall do my best to serve as President and in all the remaining years of my life, next to the duties of practicing my profession and my devotion to family, will be my interest in the Southern Medical Association and its JOURNAL.

SEALE HARRIS.

OUR FORMER EDITOR AND NEW PRESIDENT

On March 13, 1870, in Cedartown, Ga., was born one who, while not one of the original founders of the Southern Medical Association, has been affectionately termed its "wet nurse."

Seale Harris sprung from a family which is famous in Georgia and in the South. One brother, the Hon. W. J. Harris, is United States Senator from Georgia and the son-in-law of "Fighting Joe" Wheeler, of Civil War fame; another is a West Pointer, Major-General Peter C. Harris, the Adjutant-General of the United States Army; a third is James C. Harris, Superintendent of the Georgia School for the Deaf; and his younger brother, Lieutenant-Colonel Hunter Harris, is also in the regular Army.

Dr. Seale Harris received his academic training at the University of Georgia and he received his degree in medicine at the University of Virginia in 1894. His graduate studies took him to New York, Boston, Philadelphia, Baltimore and to Vienna and other European centers.

Entering general practice in Union Springs, Ala., Dr. Harris' diagnostic skill very naturally led him into internal medicine, and by 1906 his reputation was such that he was called to the chair of the Practice of Medicine at the Medical Department of the University of Alabama, situated in Mobile. This he held for seven years and only resigned it in 1913 to follow what he considered a broader opportunity for service, the editorship of the SOUTHERN MEDICAL JOURNAL and the building up of the Southern Medical Association as its Secretary and executive officer.

His ability as a teacher is enthusiastically attested by his old students, while his phenomenal success as a medical journalist and an organizer is a matter of common knowledge and of medical history. No association ever had a more enthusiastic and capable promoter nor a publication a more faithful editor than the Southern Medical Association and its mouthpiece, the SOUTHERN MEDICAL JOURNAL, possessed in Seale Harris. To his confreres throughout the South he continually spoke and wrote of his ideal, the Southern Medical Association. Of the Southern Medical Association he dreamed and for it he daily toiled, firmly convinced that the principles for which he strove were sound and the cause which he represented was worthy of the best that was in him. Consequently his labors have resulted in a mighty organization with more than 6,000 members, representing the cream of the medical men of the sixteen Southern states, who yearly convene in seventeen distinct sections for a period extending over four days, and with an influence that is felt throughout the civilized universe, and as our inimitable Stewart Roberts puts it, "It has grown to be the second largest medical organization in the Western Hemisphere and the most independent on earth."

For the past fifteen years Dr. Harris has devoted his practice exclusively to gastroenterology and to nutritional diseases. When the World War broke out and America cast her lot with the Allies, Dr. Harris was among the first to offer his services, which were later accepted, and he was commissioned a Major in the Medical Corps and placed in Surgeon-General Gorgas' office in charge of the work in gastrointestinal diseases, which it was his task to organize. The Department being aware of his exceptional talent as a journalist, he was later sent to Paris as Editor of *War Medicine*, the official organ of the A. E. F.'s research society, of which he was Secretary. Later he was selected to accompany President Wilson's party to Italy. After the signing of the armistice he made investigations regarding food conditions and

nutritional diseases in Italy, Austria-Hungary and Germany.

Before leaving the service Dr. Harris had risen to the rank of Lieutenant-Colonel and what could have been more appropriate than his selection to write the Gastro-Enterological Section of the Government's "Medical History of the World War," an assignment which he completed with that scientific ability and literary skill which has characterized his whole career. On retiring from the Army he was promoted to Colonel in the Medical Reserve Corps.

While every one was loath to see Dr. Harris relinquish his post as Secretary of the Southern Medical Association and Editor of the JOURNAL, the Council felt that his wishes in the matter could no longer be disregarded. Certain it is that the Association made no mistake in its prompt elevation of him to its Presidency. What could be more appropriate than that the builder of a great institution should be entrusted with its management? The best answers to that question have been the general expressions of approval heard from all quarters.

He is a man of keen mind, thorough education, scholarly attainments, rare culture, great breadth of vision, and with it all a most human personality. For none of these sterling qualities, however, will Seale Harris' name be remembered in medical history, for they are splendid but soon forgotten. On the other hand, through his indefatigable efforts and success with the Southern Medical Association and with his ceaseless labors upon its JOURNAL, through whose editorial columns he has played so conspicuous a part in moulding medical thought in the South, he has inspired countless physicians to greater effort and to higher attainments.

When the last chapter has been written in the life of Seale Harris, his will be an enviable place in Southern medical history, which will be that of the builder of the Southern Medical Association and of its great JOURNAL, and the one who above all others has done more to promote Southern medicine and lead it into its own than any man who has yet lived.

THE HOT SPRINGS MEETING

If a vote had been taken at the close of the last Association meeting there is no doubt that the Hot Springs gathering would have been pronounced one of the most successful and one of the most enjoyable ever held. Praise was heard on all sides and praise that was well deserved.

To begin with, there were several unique features worthy of mention. For instance, the Missouri Pacific Railroad ran a "President's Special" composed of twelve sleepers out of Memphis, and in its make-up was a private car for the President, Dr. Jere L. Crook, and his party. Surprise No. 2 was experienced a few stations away from the destination when a committee of young ladies and physicians boarded the train and came through each car, introducing themselves and shaking hands with those aboard. Another committee had a goodly supply of machines at the station to transport the visitors to their hotels. Thus all felt assured even before Hot Springs was reached that the whole town was interested in their stay and was ready at all times to be of service.

A special feature with which the Association had never been honored at any previous meeting was an elaborate decoration of the hotels, public buildings, business houses and streets with flags and bunting.

Hot Springs' various committees were so well organized and the city so accustomed to accommodating crowds that everything was handled with the greatest dispatch and there seemed nothing to re-

quire apology. One hotel alone was capable of housing 800 guests. A town of 16,000 persons which annually cares for 150,000 visitors would hardly be expected to lose its head over a convention of doctors. Incidentally not one person was heard to complain of the hotel rates or of the restaurant prices, which in all instances were most reasonable. Many who attended expected to be "held up" as is the custom in many resort and health centers, but not so at Hot Springs. Those same people went away with good will toward the place and many a physician inwardly resolved to return for a vacation some day and to recommend Hot Springs to his patients.

The wish was heard expressed by various persons that the Association meet in Hot Springs often. A member of the Council suggested that at least every third meeting be held there.

Among those attending it was common to hear the remark, "I was curious to see what the place was like." The virtues of the famous hot waters from the springs have long been sung and heralded abroad. A clinical thermometer in the mouth of the writer during a 98 degree bath, with a rise of 1 degree in body temperature, was sufficient to convince him that whatever the cause might be, or whatever its effect might be on persons suffering from specific infections, arthritis, etc., it certainly possessed some quality not to be obtained from the ordinary hot bath back home. Hot Springs, our hats are off to you, for you certainly proved that contention, any way.

The seventeen different section meetings were all well attended. As an illustration of the interest and enthusiasm manifested, mention need only be made of the Section on Obstetrics, which, finding its program a little longer than had been expected, due largely to the great amount of discussion of the papers, continued through the entire afternoon and up until 7 o'clock that night, and, better still, every man remained. This in itself answers the question sometimes heard: "Is the Southern Medical Association justified in existing?"

The most hearty thanks and greatest compliments are due the several committees of physicians for their courteous and efficient work. And in this connection due credit must be accorded the local ladies who were so solicitous of the comfort and entertainment of the doctors' wives and daughters. Late at night they stuck to their booths at the Eastman and Arlington, giving information, distributing mail and making themselves generally charming and useful. Flowers, theater tickets, teas, receptions, luncheons and auto rides were given the visiting ladies in profusion, but the most outstandingly agreeable part of the entertainment was the cordiality of the Hot Springs ladies to their visitors. All of the local committees deserve much credit. They have set a standard which it will be hard for any other city to equal in the future. Hot Springs, we were delighted with you!

The full minutes of the proceedings, attendance data, and the names of the newly elected officers will appear in the January, 1922, issue.

The next meeting will be held at Chattanooga November 13-16, 1922. It was a fitting choice on the part of the Council, for Chattanooga lacks very little of being the geographical center of the Association's territory, and furthermore it should not be forgotten that it was there that the Southern Medical Association was founded in 1905, just sixteen years ago. The accessibility of Chattanooga, with its attractive and commodious hotels, presages a record-breaking attendance.

DIGITALIS IN CARDIAC DISEASE: RESUME OF THE JOURNAL'S RECENT ARTICLES

Many varying opinions as to the heart conditions calling for digitalis, as well as the method of dosage and the preparation to be used, have been expressed in the JOURNAL in the last two years. Undoubtedly digitalis has been used where it accomplished no good and possibly did harm, and many inert preparations have been administered without beneficial results.

INEFFICIENCY OF DIGITALIS

Dr. Frank Jones[1] makes most sweeping repudiations of its efficacy in all conditions. Digitalis, he says, accomplishes less with more extravagant claims than any other remedy in the field of therapy. He gives a list of conditions in which it should not be used. In auricular fibrillation he holds it of doubtful value; for morphin and rest are more essential. In sinus arrhythmia and in aortic insufficiency it is contraindicated. For myocardial insufficiency it accomplishes nothing but discomfort to the patient. For heart block, it is like administering a purge in intestinal obstruction. In mitral insufficiency with failing compensation digitalis has its place, but even here rest, purgation, etc., may do more. In accrediting notable improvement to patients who have taken digitalis, Dr. Jones states, most physicians forget the importance of the rest, purgation and morphin which the patient is receiving at the same time.

This is an unusual view coming from a well-known physician of wide experience with these cases. Since the weight of opinion is against him, it would perhaps have been better had Dr. Jones' paper contained detailed case reports. He states that he has put patients in one ward and given digitalis with the general rest treatment and followed the same treatment in another ward without digitalis, and that his results were no better where digitalis was used. His records of these cases, if published, would bear most interestingly upon the problem.

USE AND DOSAGE OF DIGITALIS

Dr. G. Canby Robinson's[2] feeling upon the subject is opposite. He gives the results of 10 cases of cardiac disease treated by large single doses of digitalis and discusses methods of standardizing the dosage and various standard preparations. He standardized his preparation by determining the lethal dose for a cat and giving of the tincture thus standardized 0.15 cat units (referred to pounds of cat weight) per pound of body weight, with occasional variations, in a single dose. In the tincture which he used, approximately 1 c. c., or fifteen minims, equaled one cat unit. Hence, to a person weighing 140 pounds, nearly 5½ drams were given. He had no permanently bad effects in any case. All his patients were in the hospital under observation, and were kept there long enough before dosage to determine whether they had been previously digitalized.

In twenty-six cases of auricular fibrillation there was slowing of the heart in a striking manner and usually a corresponding improvement in symptoms. Edema disappeared, the patients felt well without morphin, and high blood pressure tended to fall and low to rise. The effect lasted about ten days, after which smaller doses were given.

In cases showing a regular heart with normal cardiac mechanism the effect was quite different. The heart rate was usually not slowed, and there was less improvement in symptoms.

"A comparison of the two groups of cases affords a striking example that it is in cases with

1. Jones, Frank: Role of Digitalis in Cardiac Disease. Southern Medical Journal, XIII, 6, 1920.

2. Robinson, G. Canby: Value of Large Single Doses of Digitalis in the Treatment of Heart Disease. *Ibid.*

auricular fibrillation that digitalis serves its greatest usefulness."

The discussion of the papers was almost unanimously in favor of the use of digitalis, most of the speakers feeling that to use digitalis in auricular fibrillation is an axiom of medicine, and that in cases where no good results have been obtained probably too little was employed. There were many different suggestions for obtaining an even dosage, showing that this problem is still in an unfortunately unsettled state. The preparations upon the market, it was agreed, deteriorate rapidly. It would be of great value to the profession if a simple method of accurate dosage could be agreed upon; for then comparison of the work of different observers might throw much more light upon the subject.

VALUE OF REST

Dr. J. H. Pratt[3] expressed the view that digitalis is probably the greatest advance in the treatment of heart disease. Rest, exercise and digitalis are regarded as the three essentials in the treatment of heart weakness in its various forms and stages.

He gives a history of the development of the treatment of heart disease, which up to 1873 did not include rest. Exercise and baths of all kinds were sporadically prescribed and it was held that rest weakened the heart and endangered the patient's life. Sir William Osler was the first in America to advocate rest for cardiac cases.

The action of digitalis, said Dr. L. F. Barker,[4] is to rest the heart by slowing its rate, making it contract more forcibly and making the circulation more efficient. Rest is the essential thing.

DIGITALIS IN DIPHTHERIA

Another paper which shows careful and unusual work is that of Dr. Hugh McCulloch,[5] which deals not with the administration of digitalis in general, but with the special case of administration to children with diphtheria. He believes that digitalis is useful in cases of irregular pulse, in auricular fibrillation, and occasionally good in rheumatic cases, but that it has not been established that it is of value elsewhere. It is particularly inadvisable in heart conditions brought on by diphtheria.

Diphtheria toxin produces degeneration in the nerve center in the medulla and in the axis cylinder of the fibres and paralysis of the structures depending upon them. Stimulation of the nerve trunk causes decrease in the heart rate, sometimes sinus arrhythmia, and finally heart block. Complete destruction of the vagus releases the heart from control and there is an increase in rate.

Digitalis acts by vagus stimulation and directly upon the myocardium. The effect, determined by the electrocardiagraph, is not different from other forms of stimulation, and is the same as that produced by diphtheria toxin. Digitalis is therefore dangerous, and directly contraindicated, in cases of diphtheria in children.

ACTION OF DIGITALIS

It is the consensus of opinion that digitalis is useful in medicine. Its action upon the heart has been long studied. Traube, in 1851, showed that in animals digitalis slows the pulse by stimulation of the vagus center. This slowing disappears when the vagi are cut or paralyzed with atropin. Atropin and digitalis, therefore, must not be used together. The condition of impulses from auricle to ventricle is less rapid after digitalis. In human beings this change in conduction is not inhibitory only in nature,[6] for it is not prevented by

3. Pratt, J. H.: Treatment of Heart Disease. Southern Medical Journal, XIII, 7, 1920.

4. Barker, L. F.: Discussion of above.

5. McCulloch, Hugh: On the Administration of Digitalis to Children with Diphtheria. Southern Medical Journal, XIV, 2, 1921.

complete paralysis of the vagus by atropin. In man the heart is slowed by direct action on the muscle independently of the inhibitory mechanism.

Dr. Cushny suggests the theory that auricular fibrillation in human beings is due to malnutrition of the heart.

AURICULAR FIBRILLATION

Auricular fibrillation is characterized by extreme irregularity in rhythm and in force of the beat.[6] The force bears no relation to the length of the preceding interval. There is no indication of a true auricular contraction, but the auricle is not at rest, as shown by minute oscillations in the electrocardiagraph.

"The pacemaker has lost its leadership, and its regular beating has been superseded by multitudinous impulses which arise from many points in the auricle and keep that chamber in continuous incoordinated activity, one fibre relaxing while the other contracts. No change in the total volume of the chamber results, and blood is not driven into the ventricle. . . . The mob of impulses from the auricle is reduced in passing to the ventricle, but enough pass to cause irregular rhythm, loss in efficiency, and fall in blood pressure."

According to Dr. Brachman,[7] in auricular fibrillation there is complete irregularity of heart and pulse. The force of the individual heart beat varies and some of the ventricle beats do not reach the wrist. The heart rate should be taken at the apex as well as at the pulse. The latter is the index of the number of efficient ventricle contractions.

DIAGNOSIS OF AURICULAR FIBRILLATION

Two other conditions cause irregularly irregular pulse:[7] multiple premature beats, especially when auricular in origin, and sino-auricular heart block. In cases of ventricular origin, there is an underlying regular rhythm, made more regular by exercise. Exercise makes auricular fibrillation more irregular.

Sino-auricular heart block usually has an approximately normal or lower heart rate, apex and pulse rates are the same, and there are long pauses in which the heart is silent.

The signs of auricular fibrillation, according to Dr. Brachman, are (1) irregularly irregular pulse; (2) enlarged transverse diameter of the heart; (3) difference in the apex and pulse rate.

According to the "Handbook of Therapy,"[8] published by the American Medical Association,

"Auricular fibrillation is best diagnosed by tracings taken simultaneously of the heart, the jugular and the radial. But the jugular tracing is almost conclusive in the absence of the auricular systolic wave. The radial tracing is exceedingly suggestive, and if it is taken with a careful stethoscoping of the heart, an almost certain presumptive diagnosis may be made."

OBJECT OF DIGITALIS THERAPY

As the left ventricle is mainly responsible for the circulation, it is important to determine what effect the fibrillation of the auricles will have on the circulation as a whole, particularly on it.[7] Digitalis prevents or decreases the conduction of impulses from auricle to ventricle.

The object of treatment in auricular fibrillation is to get the rate at a level to produce adequate circulation without undue ventricle work, usually 65-80 per minute. Digitalis should be given till the pulse is 50, stopped, and then given in smaller dosage to the desired rate. Occasionally the rate must be 90 per minute. Then the prognosis is worse.

In treating heart disease with digitalis, then, first, the condition must be accurately diagnosed. If auricular fibrillation be found, digitalis is indicated. There may be other conditions in which it is useful. A freshly standardized preparation of dig-

6. Cushny, Arthur S.: Lancet, June 9, 1917.
7. Brachman, D. S.: Auricular Fibrillations. Lancet, February 19, 1921.
8. Osbourne, Fishbein and Salisbury: Handbook of Therapy, 1915.

italis and a sufficiently large dose should be administered. In auricular fibrillation, if there are no beneficial results from digitalis, one may with reasonable safety conclude that the dose is insufficient or the preparation inert.

Book Reviews

Diseases of the Skin. A Practical Treatise of Diseases of the Skin for the Use of Students and the Practitioner, by Oliver S. Ormsby, M.D., Professor and Head of the Dept. of Skin and Venereal Diseases, Rush Medical College; Dermatologist to the Presbyterian, St. Anthony's, and the West Suburban Hospitals, and the Home for Destitute and Crippled Children. Consulting Dermatologist to the Orphan Asylum of the City of Chicago; Member American Dermatological Association, and of the Congress of American Physicians and Surgeons. Corresponding Member of the Section of Dermatology of the Royal Society of Medicine, London. Second Edition, thoroughly Revised, and Illustrated by 445 Engravings and 4 Plates in colors and monochromes. Philadelphia and New York: Lea & Febiger, 1921.

There is a dull sameness about many texts on diseases of the skin which this book, one of the old, standard conservatives, does not escape. To those who have known it under different names, revised and paraphrased, but always practically the same from the days of the sponsorship of Hyde, on through the series by Hyde and Montgomery, and then through the editions under Ormsby's name, it comes as an old familiar friend, changed only as time may be expected to change such a one. It is, perhaps, a result of this long continued revision at the hands of several authors that the book lacks personality and human interest. Too often its paragraphs, particularly those on treatment, are only dull collections of gathered facts and colorless quotations which give no hint of the author's beliefs and preferences.

The section on syphilis is admirable, and cannot be too highly praised. Nothing said of the book in general can be applied to it.

The illustrations are generous and excellent.

Syphilis, by Lloyd Thomson, Ph.B., M.D., Physician to the Syphilis Clinic, Government Free Bath House. Visiting Urologist to St. Joseph's Hospital; Consulting Pathologist, Levy Memorial Hospital, Hot Springs, Ark.; Lieutenant-Colonel, M.R.C., U. S. Army. Member, American Urological Association and American Association of Immunologists. Illustrated with 81 engravings and 7 plates; 486 pages. Second edition, thoroughly revised. Philadelphia and New York: Lea & Febiger, 1920.

This is one of the most thorough of the recent books upon syphilis. Beginning with the history and origin of the disease in ancient times, its economic importance and its etiology, the author discusses syphilis in all its phases in the light of the tremendous advances that have been made in knowledge of it in the last seventeen years. Treatment of congenital and acquired syphilis is fully described. The most important changes in the second edition are in the sections dealing with visceral syphilis, though other sections have been amplified.

Practical Psychology and Psychiatry. For Use in Training Schools for Attendants and Nurses, and in Medical Classes, and as a Ready Reference for the Practitioner. By C. B. Burr, M.D., Medical Director Oak Grove Hospital (Flint, Michigan) for Mental and Nervous Diseases; Member, American Medico-Psychological Association, American Neurological Association; Fellow of the American College of Physicians; Foreign Associate Member of Societe Medico-Psychologique of Paris, etc. Fifth Edition, Revised and Enlarged, with Illustrations. 269 pages. Philadelphia: F. A. Davis Co. 1921.

This book contains a discussion of normal thinking and psychology, of different varieties of insanity, their prognosis and treatment, and closes with a chapter upon the prevention of insanity. The author expresses the belief that the existence of syphilis at any period of life should constitute a bar to procreation.

It is a useful brief, ready reference work.

General Pathology. An Introduction to the Study of Medicine, Being a Discussion of the Development and Nature of Processes of Disease. By Hans Oertel, Stud.theol. Professor of Pathology and Director of the Pathological Museum and Laboratories of McGill University and of the Royal Victoria Hospital, Montreal, Ca. 357 pages. New York: Paul B. Hoeber, 1921.

Dr. Oertel emphasizes throughout his work the explanation of pathological processes as expressions of physico-chemical laws, rather than as inimical events against which the body consciously struggles to defend itself. "Pathological definitions and conceptions unfortunately still abound in metaphysical and teleological ideas, even though it is 62 years since Virchow's effort to lift pathology to the level of other sciences."

In his chapter on Local Cell Relations he says: "We must endeavor to understand and then explain pathological processes by their genetic relations without reference to anything outside of them, giving due consideration to all parts, whether we see anything useful in them or not. In fact the study of inflammation cannot be approached with a scholastic, ready-to-go [illegible] of the old psychology which commenced the study of psychic phenomena with a definition of the soul and then arranged the facts to suit that definition."

He is very complete and thorough throughout, as for instance his description of the differentiation of tuberculosis from syphilis granulation tissue.

The first part of the book deals with the etiology of pathological conditions, under which he discusses bacteria and infection, physical and chemical factors, and internal factors. The latter part is upon pathology, anatomy, histology and pathogenesis, under which are treated pathological changes in cells, and in local cell relations, and changes of general cell, tissue and organ interrelations. Last comes general somatic death which is in metazoa "the necessary outcome of integrative cell action which first creates and then destroys differentiation and gradually eliminates cell liability. It is added by the general environmental influences which constantly tend to reduce complex, unstable compounds to simple, stable substances. . . . While we are living, we are dying, and life and death are not antithesis."

While distinctly in the text or reference book style, this work shows marked power and originality and is a valuable addition to modern pathology literature.

Cancer and Its Non-Surgical Treatment. By L. Duncan Bulkley, A.M., M.D., Senior Physician to the New York Skin and Cancer Hospital, Member of the American Association for Cancer Research. 457 pages. New York: William Wood & Co., 1921.

Dr. Bulkley is very harsh with surgery in the openinz chapter of his book, when he states that the "mortality from tuberculosis, under wise medical care, has declined about 30% in the last 20 years, while that from cancer in the same period, under surgical domination, has risen as much." He advocates dietic, hygienic and medical treatment of cancer.

Because of its constant recurrence after removal and because of the many metastases, he holds that cancer must be of a constitutional nature associated with dietary or nutritional disturbances. "Statistics from many countries show that a per capita increase in the consumption of meat, coffee and alcoholic beverages appears to be coincident with a very great and proportionally greater augmentation in the mortality of cancer."

His treatment consists chiefly in the administration of an absolutely vegetarian diet, excluding tea, coffee, chocolate, and alcoholic beverages, slow eating, perfect mastication, and free evacuation, and regulation of meal hours, rest, sleep and recreation. As to medicines, he considers potassium salts helpful, and certain salves.

He reports a large number of cures or marked improvement of cases, and post-operative cases of cancer of the lip, tongue, breast, uterus, and other parts of the body.

In the opinion of the reviewer these views are so untenable as to constitute a written calamity.

The International Medical Annual. A Year Book of Treatment and Practitioner's Index. 39th year. 564 pages, illustrated. New York: William Wood & Co., 1921.

There was a time [illegible] when all [illegible] in one volume a resume of medical progress for each year. Such a need this "Medical Annual" has been meeting for 39 years. The contributors are recognized medical authorities. In the introduction there is a review of the year's work, which is worth while for every doctor to read. In part I materia medica and therapeutics are arranged alphabetically. Such topics as radiography, radio-activity and electro-therapeutics include all the recent studies and latest methods. Part II contains "The Dictionary of Treatment," which is very complete and full of helpful information concerning the newer methods of therapy.

The Practical Medicine Series, comprising 8 volumes of the Year's Progress in Medicine and Surgery, under general editorial charge of Charles L. Mix, A.M., M.D., Professor of Physical Diagnosis in the Northwestern Medical School. Chicago: The Year Book Publishers.

This is the first volume of the series, "General Medicine," edited by Frank Billings, M.S., M.D., Rush Medical College, and Burrell O. Raulston, A.B., M.D., of Presbyterian Hospital. No doubt the older practicing physicians are familiar with this series, and the present volume on general medicine is abreast with the high standard of former series. It takes up the subjects according to the general plan of all standard text books on practice of medicine. By reading this volume one is enabled to review the progress of medicine during the past year.

Exophthalmic Goiter and Its Nonsurgical Treatment. By Israel Bram, M. D., Instructor in Clinical Medicine, Jefferson Medical College, Philadelphia, Pa.; Physician on Visiting Staff of Philadelphia General Hospital; Member of the Society for Study of Internal Secretions, etc. With 410 pages. St. Louis: C. V. Mosby Co., 1920.

The purpose of this book, besides that of stimulating interest in the subject, is to convince the reader that exophthalmic goiter does not belong in the realm of surgery. He treats the subject thoroughly, from the anatomy, pathogenesis, and diagnostic tests, through its course, giving the non-surgical treatment. He quotes Professor Solomon Solis-Cohen, who says:

"The thyroid enlargement with or without hyperactivity and later hypoactivity is secondary; and its results are epiphenomenal, not fundamental. . . . . Operation is never curative of the basic condition, which still remains to be treated."

He concludes with arguments against operation: That the patient is too nervous and excitable, and frequently has sugar in the urine. After operations there is danger of acute exacerbations of hyperthyroidism, of recurrence, of status lymphaticus, occasionally of tetany, of injury to the recurrent laryngeal nerve, of myxedema, and of devitalization.

While we believe that the medical treatment of exophthalmic goiter is important, we do not believe that Dr. Bram proves his point by any means. Surgery has saved the life of many an exophthalmic goiter patient who was beyond the hope of medical aid. However, all should be familiar with Dr. Bram's views which are well stated.

Practical Dietetics. Diet in Health and Disease. By Alida Frances Pattee. Thirteenth edition, revised, 504 pages. A. F. Pattee, Publisher, Mount Vernon, N. Y., 1920.

This excellent book needs no introduction, for it is used in nearly every hospital and by many physicians in prescribing diets for patients. The general plan is the presentation of principles of nutrition and food preparation; practical application of principles of nutrition; hospital dietaries, diet in diseases, and diet in special conditions. It has been brought up to date, so that all recent facts of nutrition have been incorporated.

A Practical Medical Dictionary. By Thomas Lathrop Stedman, A.M., M.D., sixth revised edition, 1114 pages. New York: William Wood & Co.

Stedman's Medical Dictionary has always occupied first place in the medical student's library, and very few practising physicians are without it. This sixth edition measures up to the standard high mark of former editions. It has incorporated all recent medical facts, and is strictly up to date in every respect.

Practical Chemical Analysis of Blood. A Book designed as a Brief Survey of this Subject for Physicians and Laboratory Workers. By Victor Caryl Myers, M. A., Ph. D., Professor of Pathological Chemistry, New York Post Graduate Medical School and Hospital. With 119 pages, illustrated. St. Louis: C. V. Mosby Co., 1921.

Laboratory books are increasingly in demand by physicians as well as students, since laboratory examinations are essential in practically all diagnoses today. The book gives and discusses chiefly the generally used methods which have been found of definite clinical value, for determining the chemical contents of the blood. This does not include bacterial analyses. Determinations of non-protein and urea nitrogen, uric acid, creatinine, blood sugar, carbon dioxid combining power, cholesterol, and chlorids are described. The appendix contains brief methods of urinalysis. This will be a valuable reference book in laboratory work now that blood chemistry has come to play so important a role in modern diagnosis.

A Synopsis of Medicine. By Henry Letheby Tidy, M.A., M.D., B.Ch. (Oxon.), F.R.C.P. (London), Assistant Physician, St. Thomas' Hospital; Physician to the Great Northern Hospital; formerly Assistant Clinical Pathologist and Medical Registrar to the London Hospital. 911 pages. New York: William Wood & Co., 1921.

The author in his preface states that the book is intended for the student preparing for final examination, or the hurried practitioner from whose ken they have long passed or for teachers with a lecture to prepare.

The fact that the text covers 911 pages would seem to make it not very suitable for a rapid review for the student.

That in a book of this kind the author has given so little space to the prophylaxis of the infectious diseases is also an omission.

Certain sections are much clearer than others, as for example the section on diseases of the nervous system, which is the best in the book.

Treatment is outlined in such a manner that unless one were quite familiar with this subject the book would be of very limited use to him.

The book is well made, the print clear, and it is free from typographical errors.

Psychological Verse Series. Perrinette. A Book of Verse, by Herbert Hugh Caxton. Introduction by Frederic Farnell, M. C., F. A. C. S. With 61 pages. Providence: Premier Publishing Co., 1920.

Here we have psychoanalysis the role of the subconscious, of dreams, of the repressed wish, expressed in a series of short poems. For those who wish the gist of Freud without reading Freud, and who do not object to the doubtful metre and unique rhymes, we recommend this little book.

Manual of Surgery. (Rose and Carless.) For students and practitioners. Tenth edition. By Albert Carless, C. B. E., M. B., M. S. Lond., F. R. C. S. Colonel (Temp.) A. M. S.; Consulting Surgeon, Eastern Command; Emeritus Professor of Surgery in King's College, London, and Consulting Surgeon to King's College Hospital; formerly Examiner in Surgery to the Universities of London, Glasgow, Manchester, Liverpool, and Leeds, and to the R. A. N. C.; Medical Director, Barnardo Homes, etc. With 1558 pages, illustrated. New York: William Wood & Co., 1920.

This is probably the best work of its size on surgery. Without superfluous words it gives the essence of the subject. It is a splendid handbook, which has had a large popularity in America as well as in Great Britain. The new edition is well up to the standard of its forerunners.

Paracelsus, His Personality and Influence as Physician, Chemist, and Reformer. With 184 pages, illustrated. By John Maxson Stillman, Professor of Chemistry Emeritus, Stanford University. Chicago and London: The Open Court Publishing Co., 1920.

This is a brief but scholarly biography of the great philosopher, physician and chemist who dreamt in the Sixteenth Century of a medical and chemical science founded "not upon dogma, but upon observation and experiment." His early life, view of nature, medical theory, chemistry, and theology are ably described, and it is attempted to evolve the truth from the many contradictory legends of the man.

For true scientists, who are always interested in the history of their science, this little book will have value and charm.

Public Health and Hygiene, in Contributions by Eminent Authorities. Edited by William Hallock Park, M. D., Professor of Bacteriology and Hygiene, University and Bellevue Hospital Medical College; Director Bureau of Laboratories and Department of Health, New York City. Illustrated with 123 engravings, 883 pages. Philadelphia and New York: Lea & Febiger, 1920.

This is one of the ablest and most inclusive recent books upon public health. Dr. Park starts the book with a discussion of microorganisms in general and in particular, and antiseptic chemical substances, the prevention of individual infectious diseases and the use of disinfectants. The rest of the book contains in addition to treatises by the editor, various chapters by eminent authorities. Sanitary surveys, housing and food, with particular attention to bacterial contaminations of milk, meat and other foods, water supplies, personal, military, tropical, industrial, mental and child hygiene, mental defectives, quarantine, and vital statistics, are all well handled. It is a splendid book for the public health officer, or for the physician, and will hold the interest of public spirited citizens.

Operative Surgery. By J. Shelton Horsley, M.D., F.A.C.S., Attending Surgeon, St. Elizabeths Hospital, Richmond, Va. 521 pages, with 615 illustrations. Illustrated by Miss Helen Lorraine. St. Louis: C. V. Mosby Co. 1923.

This is a practical textbook, the aim of which is, according to the author, to describe processes which as nearly as possible preserve normal biological function. It does not attempt to cover the whole field of surgery, but is rather a record of the author's personal experience. A great variety of operations, however, are described. Beginning with drainage, suturing operative complications, and such general subjects he goes at length into work involving particularly blood vessels, such as transfusion, ligation, reversal of circulation, and aneurisms; describes also operations upon nerves, bones, and plastic surgery, then begins with specific parts of the body both male and female and describes one or several operations upon each part.

Dr. Horsley's judgment upon the value of different operations is logically expressed, and the whole is an interesting addition to the literature of surgery.

Diseases of Women, Including Abnormalities of Pregnancy, Labor, and Puerperium. A Clinical Study of Pathological Conditions Characteristic of the Five Periods of Woman's Life. Presented in One Hundred and Seventy-three Case Histories. By Charles M. Green, A.B., M.D., Professor of Obstetrics and Gynecology, Emeritus, in Harvard University; Senior Surgeon for Diseases of Women, Boston City Hospital; Formerly Visiting Physician, Boston Lying-in Hospital; Fellow of the American College of Surgeons; Member of the American Gynecological Society. Second edition, with 286 pages, 32 full-page plates, one text and 25 charts in the text. Boston: W. M. Leonard, 1920.

In the field of case teaching is the greatest approach to the bedside clinic that we can attain in writing. The cases here chosen are illustrative of important points. The revised edition will no doubt have the popularity of the first. It is readable as well as instructive.

Physical Diagnosis. By W. D. Rose, M.D., Lecturer on Physical Diagnosis and Associate Professor of Medicine in the University of Arkansas; Demonstrator of Clinical Medicine and Chief of the Medical Section of the Isaac Folsom Clinic; Visiting Physician Logan H. Roots Memorial (City) Hospital, Little Rock, Ark. Second edition, 697 pages, 309 illustrations. St. Louis: C. V. Mosby Co., 1921.

This book confines itself chiefly to diagnosis, as its name indicates. He devotes 300 pages to the thorax, one-third of which space is upon diseases of the respiratory organs. He deals with the circulatory organs and their diseases, the abdomen and special examination of the viscera, the head, neck and extremities, and briefly with the nervous system. The second edition is an improvement over the first, which itself was a very worth-while volume.

Surgery: Its Principles and Practice, for Students and Practitioners. By Astley Paston Cooper Ashhurst, A.B., M.D., F.A.C.S., Associate in Surgery in the University of Pennsylvania; Surgeon to the Episcopal Hospital and to the Philadelphia Orthopedic Hospital and Infirmary for Nervous Diseases; Colonel, Medical Reserve Corps, U. S. Army. 1202 pages. Second Edition, Thoroughly Revised. With 14 colored plates and 1129 illustrations in the text mostly original. Philadelphia and New York: Lea & Febiger, 1920.

This was written to "furnish the foundations on which a knowledge of surgery is to be laid," and covers surgery of all parts of the body. In the second edition the chapter on gunshot wounds has been largely rewritten and revised and other chapters have been brought up to date.

The illustrations are worthy of the book. They comprise a most unusual number of drawings and clear photographs of rare as well as common conditions. The text shows conservatism, good judgment and information, and clarity of style.

Rational Treatment of Pulmonary Tuberculosis. By Charles Sabourin, M.D., Medical Director of the Durtol Sanatorium, Puy-De-Dome, France. Authorized English Translation from Sixth Revised and Enlarged French Edition. 350 pages. Philadelphia: F. A. Davis Co.

The view of the French does not differ materially from that of authorities in this country concerning the treatment of pulmonary tuberculosis. Dr. Sabourin discusses the rational treatment, air, rest, diet, etc., according to the methods employed in his institution in France. There are chapters on how tuberculosis is acquired, the clinical course, the curability, and mortality from tuberculosis, and the need for early diagnosis in tuberculosis. Then there follows systematic discussion of the treatment, in general, and of the complications. While there are many books written on this subject, this ranks as an authority.

Greek Medicine in Rome. The Lettsomian Lectures on the History of Medicine Delivered at the Royal College of Physicians of London in 1920, with Other Historical Essays. By the Rt. Hon. Sir T. Clifford Allbutt, K.C.B., M.A., M.D., F.R.C.P., F.R.S., Hon. F.R.C.P.I., Hon. LL.D., Hon. D.C.L., Hon. D.Sc., etc. Regius Professor of Physic in the University of Cambridge, Fellow and Some Time Classical Scholar of Gonville and Caius College. London, Macmillan & Co. Ltd., 1921.

Taking as his premise that "A Greece void for idea without order" during the ascendency of Rome "the function of Rome on the contrary was latin: the establishment of order without ideas," Dr. Allbutt gives us a history of medicine in Rome beginning with primitive times down through Palissy and Roger Bacon, taking up leading names of the middle ages. He is the source of a learned historian as well as a physician who is steeped in the philosophy of ancient times.

His description of the theories of the pneumatists, who laid great stress upon air, believing that the soul itself was an air or vapor, are interesting as we look back from the viewpoint of modern times. "Night air was cold and thick, and consequently apt to cause obstruction, heat and inflammation. The air of day was warm and thick so that natives of towns were apt to cause trouble in their intestines. The air of crooked valleys was bad, so likewise the air of river flats and of marshy places. . . . Drinking water was to be filtered through porous stone or earth, but particularly to remove dirt and leeches." "The water supply of our largest cities is now, per head, about one-tenth of the supply of ancient Rome."

The author has made an effort to give credit for advancement in science to whom it was due, and shows an understanding both of the facts and the feeling of the time.

Psychopathology. By Edward J. Kempf, M.D., Clinical Psychiatrist to St. Elizabeth's Hospital (formerly Government Hospital for the Insane), Washington, D. C.; Author of "The Autonomic Functions and the Personality." 762 pages and 85 illustrations. St. Louis: C. V. Mosby Co., 1920.

This treatise upon abnormal psychology is one of the many written influenced by the Freudian theory that sex is the overpowering impulse in all human behavior, from committal of murder to each animal pair of the house or pen. It has long been our feeling that too much time is spent upon the study and interpretation from a psychic basis of abnormal psychic states, which usually rest upon or have been caused by a purely physical abnormality.

We are not shocked by the author's "frank" dealing with the subject of human behavoir, but are unconvinced by his explanations. No architect among Kempf's acquaintances may sketch a house with two doors; for one is always interpreted as a vagina and the other as an anus. A near-by tree may be either pubic hair or an erect penis.

The cases recorded, however, are most interesting, and the work is thoughtful and scholarly.

Infections of the Hand. A Guide to the Surgical Treatment of Acute and Chronic Suppurative Processes in the Fingers, Hand, and Forearm. By Vaughan B. Kanavel, M.D., Assistant Professor of Surgery, Northwestern University Medical School; Attending Surgeon, Wesley and Cook County Hospitals, Chicago. Fourth Edition, Thoroughly Revised with 98 pages containing 168 illustrations. Philadelphia and New York: Lea & Febiger, 1921.

The increasing prominence of specialism is shown in the fact that this work has gone into its fourth edition. The print is large and readable, the illustrations are good, and the book will be useful to hospital or private practitioner. The author aims particularly to describe such treatment as will preserve function in the treated part.

Owing to the arrangement of the book, which deals first in general, then specifically with simple localized infections, and in general then specifically with grave infections, there is some repetition. This probably, however, serves to emphasize the essential points. [illegible]

Handbook of Electrotherapy. By Burton Baker Grover, M.D. Philadelphia: F. A. Davis Co.

Electricity as a therapeutic agent is being recognized more and more each year. Its successful use depends upon thorough knowledge of the principles and manner of application. Dr. Grover describes the [illegible] high-frequency and sinusoidal [illegible] in a comprehensive way, that anyone interested in such therapy can satisfactorily employ such measures after carefully studying this book.

American Red Cross Work Among the French People. By Fisher Ames, Jr. With 175 pages, illustrated. New York: The Macmillan Co., 1921.

Beginning with the American Relief Clearing House, which was later merged with the Red Cross, Mr. Ames gives us an account of Red Cross work in France from before the American Declaration of War, until the reconstruction period. He describes the beginning of activities in distributing American gifts which had miscarried, and the swift increase of scope of the Red Cross which made it finally take care not only of the soldiers who were wounded, who needed new arms, new legs, new faces, but of the French men and women who were to be, namely, the desolate, sick and starving, children.

The book gives a vivid account of a work which it is our duty as well as our pleasure to learn to know intimately. Probably the greatest organization and the greatest idea which grew out of the war is the reorganized American Red Cross.

The New Pocket Medical Formulary. By W. E. Fitch, M.D. Third edition, revised. Philadelphia: F. A. Davis Co., $2.50.

This pocket manual stands ready to offer suggestions in prescription writing out of the experience of prominent and successful physicians. Many valuable tables and suggestions are given.

Sex, for Parents and Teachers. By William Leland Stowell, M.D., formerly Instructor in Diseases of Children, New York University Medical College; Attending Physician to New York Congregational Home for the Aged; formerly Consulting Physician to the New York City Children's Hospital and Schools; Author of Articles on Children in the New International Encyclopedia, second edition; many medical papers; and "The Doctor Outside of Medicine." 204 pages, illustrated. New York: The Macmillan Co., 1921.

From the name one may guess the contents of the book. The author approaches the problem in a practical, simple, and comprehensible way. Sex, he says, is intimately related to the best in painting and sculpture, is interwoven in the finest literature, and is "the controlling impulse or cause of man's best efforts in many departments of life, and also at the bottom of the basest and least desirable of human activities." Parents fail to instruct children in this largely through ignorance of biological principles and from lack of vocabulary. The subject should be approached from a biological standpoint, explaining the life of flowers, birds and animals to the child. His own origin should be gradually led up to. All information concerning heredity, social diseases, etc., which may protect him should be given him.

General Practice and X-Ray. By Alice Vance Knox, M.B., B.Ch. With chapters on Production of X-Rays and Instrumentation by Robert Knox, M.D. 214 pages, 32 plates, 46 diagrams. London: A. & C. Black.

A handbook for the general practitioner and student, which is one of the many useful smaller books on x-ray, from the Edinburgh Medical Series.

Practical Massage. Corrective Exercises with Applied Anatomy. By Hatrvig Nissen. Fourth revised edition. 225 pages. Philadelphia: F. A. Davis Co.

Massage, manipulations, Swedish movements, and such kindred topics are carefully described and excellently illustrated. Many years of successful experience with these methods add weight and authority to the text.

Manson's Tropical Diseases. Edited by Philip H. Manson-Bahr, Physician to Hospital for Tropical Diseases, London. Seventh edition, revised and enlarged, 960 pages, 21 color plates, 6 half-tone plates, 404 figures in the text, 31 charts. New York: William Wood and Co., 1921.

It has been four years since the sixth edition appeared, and since then many advances have been made in tropical diseases. Aside from the work in the war zone, which contributed many important facts, scientific investigation has gone on in the home lands. Noguchi, and his associates, have described the parasites probably responsible for yellow fever, as leptospira icteroides, all of which facts are presented in this manual. There are superb colored illustrations, and certainly this excels all former editions. The atropine test for "enteric fever" is described in detail. This is probably the most complete one-volume work on tropical diseases we have. It appeals especially to the men in southern climates, where many tropical diseases appear.

Southern Medical News

ALABAMA

On October 1 the State Laboratory and Pasteur Institute moved into their new modern quarters in the Health Building, Montgomery. New equipment has been installed.

Deaths

Dr. Joseph K. Crowder, Birmingham, aged 43, died at the Birmingham Infirmary September 22 following an operation.

Dr. William Francis Beckett, Titus, aged 88, died October 4.

Dr. Eli Spear Jones, Gadsden, aged 38, died recently after a long illness.

ARKANSAS

The office of Dr. B. F. Kelley, Big Flat, was destroyed by fire November 9 with a loss of $500.00.

It has been announced that three additional buildings will be erected at the State Tuberculosis Sanatorium, Booneville.

Dr. Nicholas Frederick Weny and Miss Gladys McClain, both of Little Rock, were married August 10.

Dr. Frederick E. Harrison and Miss Mittie Smith, both of Fordyce, were married September 28.

Deaths

Dr. John Calhoun Chenault, England, aged 55, died September 28.

DISTRICT OF COLUMBIA

The American Roentgen Ray Society held its twenty-second annual meeting in Washington September 27-30. Dr. W. H. Stewart, New York, N. Y., was elected President; Dr. Hollis E. Potter, Chicago, Secretary.

At the recent meeting of the Electrotherapeutic Association, held in Washington, the following officers were elected: Dr. Virgil C. Kinney, Wellsville, N. Y., President; Dr. Willard Travel, New York, N. Y., Treasurer; Dr. A. Bern Hirsh, New York, N. Y., Secretary.

Under the auspices of the Public Health Service, District of Columbia Social Hygiene Society and the Woman's Advisory Council of the Public Health Service, a three days' institute on social hygiene was held recently in Washington in the Interior Department Auditorium.

Dr. August Pacini, Washington, was awarded the prize of $1,000 for research work in roentgen-ray experimentation by the American Roentgen Ray Society at its recent meeting in Washington.

The silver cup given by the National Tuberculosis Association to the school children of Washington for having the highest enrollment of Modern Health Crusaders in the inter-city tournament has been presented to Frank W. Ballou, Superintendent of Schools, Washington, by the President.

Dr. Royal H. McCutcheon, Chief of the Tuberculosis Section of the U. S. Veterans' Bureau, has been appointed medical officer in charge of the War Veterans' Hospital, Mont Alto, Pa.

Physicians and surgeons who are members of the University Club, Washington, recently organized a society which will hold luncheons weekly, and a brief program will be given twice monthly. Officers were elected as follows: Dr. Noble P. Barnes, President; Dr. G. T. Vaughan, Vice-President; Dr. Everett M. Ellison, Secretary-Treasurer.

Dr. Ervin A. Peterson, Director of the Health Service, American Red Cross, Washington, has resigned to take the position of Director of the Cuyahoga County Public Health Association, Cleveland, Ohio.

Sir Harold Stiles, Regius Professor, University of Edinburgh, has been visiting his fellow graduate, Dr. Tom A. Williams, Washington. Sir Harold came to America to give the convocation address before the American College of Surgeons and visited several of the chief surgical clinics also.

Deaths

Dr. William Henry Fox, Washington, aged 64, died November 3.

FLORIDA

Dr. F. E. Thomason, St. Petersburg, has been appointed Clinical Director of the State Hospital at Chattahoochee to succeed Dr. W. H. Spiers, resigned.

Capt. W. H. Gillette, with the U. S. Public Health Service, Washington, is in St. Augustine to establish a Government

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Southern Medical News

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clinic for venereal diseases, under the direction of the State Board of Health.

Deaths

Dr. William H. DeLacy, Crestview, aged 43, died October 13.
Dr. C. T. McClintock, Sarasota, died recently.

GEORGIA

Dr. E. C. Thrash, Atlanta, has been elected President of the Georgia Tuberculosis Association.

Under the auspices of the Whitfield County Medical Society a new organization, to be known as the Tri-County Medical Society, was formed at Dalton on September 13. The following officers were elected: Dr. Samuel A. Brown, Eton, President; Dr. Evan O. Shellhorse, Calhoun, Vice-President; Dr. Zeb Johnson, Red Bud, Secretary.

The seven-story annex of the Davis-Fischer Sanatorium, Atlanta, which increases the capacity of the institution from 90 to 200 beds, was formally opened in August. The estimated value of the property is $450,000.

Dr. W. Frank Wells, Hapeville, has succeeded Dr. Walter E. Barber, Atlanta, as a member of the Fulton County Board of Health.

The Government has purchased the Lenwood Hospital property and 157 acres in addition at Augusta, and will increase the capacity of the institution from 200 to 500 beds. The appropriation for the increase is over $800,000.

Dr. Elizabeth Bass Reed, U. S. Public Health Service, has been assigned to lecture to the women throughout the State.

Plans are being drawn at West Point for a frame building to be used as a hospital, the purpose being to take care of the congestion at the Langdale Hospital by accommodating cases nearer West Point. The building will cost about $8,000.

Dr. De Lamar Turner, Savannah, has been appointed County Physician to succeed Dr. Elton S. Osborne.

Deaths

Dr. Simon T. Whitaker, Berlin, died September 11 from appendicitis.

Dr. Edward G. Jones, Atlanta, aged 47, died October 6.

Dr. William A. Richards, Calhoun, aged 58, died September 22.

KENTUCKY

Dr. Ralph J. Malott has resigned as full-time Health Officer of Harlan County, and as Secretary of the Harlan County Medical Society to go to Williamson, W. Va., to organize and direct a full-time health department for Mingo County.

The wing to be added to St. Antony's Hospital, Louisville, will be erected at a cost of between $150,000 and $175,000.

Dr. L. F. McMurtry, Louisville, has been appointed a member of the State Board of Health to succeed Dr. John G. South, who resigned to take the office as Minister to Panama.

Dr. Arthur T. McCormack, Louisville, was elected President of the Kentucky Conference of Social Work at the meeting held in Lexington October 23.

(Continued on page 38)

BENZYLETS

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(Continued from page 1024)

The Universal Mine Workers at Madisonville will erect a hospital at a cost of $1,000,000.

Dr. Octavus Dulaney, formerly with Baird-Dulaney Hospital, Dyersburg, Tenn., announces that he has located in Louisville. Practice limited to ear, nose and throat with offices in the Starks Building.

Dr. Major Threlkeld, Hazard, and Miss Mary Bryan Campbell, Louisville, were married on September 29.

Deaths

Dr. Isaac P. Gould, Bellevue, aged 50, died October 3 from acute nephritis.

Dr. Samuel N. Willis, Vine Grove, aged 70, died September 26 from bronchopneumonia.

Dr. George T. Mounsey, Louisville, aged 59, died October 23 from pleuropneumonia.

Dr. Samuel B. Robinson, Warsaw, aged 64, died October 11.

Dr. Charles Ross Bennett, McHenry, aged 35, died October 2 from angina pectoris.

Dr. William Henry Anderson, Louisville, aged 78, died September 23.

Dr. John F. H. Duff, Shelbyville, aged 71, died recently from injuries received when struck by an automobile.

Dr. Samuel N. Willis, Vine Grove, aged 70, died recently from bronchial pneumonia.

LOUISIANA

The Tri-State Medical Society of Arkansas, Louisiana and Texas will hold its next annual meeting in Shreveport December 7-8.

A new hospital exclusively for the treatment of diseases of the eye, ear, nose and throat will be erected in New Orleans at a cost of approximately $350,000.

Additional buildings to be erected at the U. S. Public Health Service Hospital, Camp Stafford, will cost approximately $100,000.

Under the direction of Ernest R. Barber, Government Entomologist, a plan to destroy the Argentine ant in New Orleans by placing cans of poisoned syrup at each city block is now in progress. This will cost the city $25,000.

Resolutions have been addressed to Louisiana Senators in Washington, D. C., by the New Orleans Association of Commerce urging an immediate appropriation to enlarge the Federal home for lepers at Carville in order to care for nearly one hundred cases on the waiting list.

Dr. George Walter has been appointed Pathologist and Roentgenologist at the St. Francis Sanatorium, Monroe.

Dr. Wilkes Adams Knolle and Miss Hilma Fredrichs, both of New Orleans, were married October 12.

Dr. G. G. McKellar, Couchwood, and Miss Lidian Smith, Northern Copiah, were married October 8.

Deaths

Dr. Espy M. Williams, Monroe, aged 41 died at St. Francis Sanatorium October 19.

Dr. Paul H. V. Dejoie, New Orleans, aged 49, died October 7.

Dr. George W. Remage, Jennings, aged 84, died from chronic nephritis September 23.

Dr. Willis C. R. Ford, Lisbon, aged 48, died recently.

Dr. John F. Stockwell, Baton Rouge, aged 32, died October 26 from typhoid fever.

Dr. J. W. Cockerham, Natchitoches, aged 84, died October 3.

MARYLAND

Dr. Emil Heller Henning has been appointed Health Officer in the Public School Division of the Baltimore City Health Department to succeed Dr. Ferdinand Reinhard.

The fifth annual meeting of the National Society for the Promotion of Occupational Therapy was held in Baltimore October 20-22.

Dr. Sydney Robothan Miller, Associate Professor of Clinical Medicine in the Johns Hopkins Medical School, and President of the American Congress of Internal Medicine, has joined the staff of the University of Maryland School of Medicine.

Dr. William Houston Toulson, Baltimore, and Miss Helen Goodwin Joynes, of Accomac County, Virginia, were married at Baltimore October 15.

Dr. George Edward Wells, Baltimore, and Miss Pauline Stotler Wilson, Keyser, W. Va., were married September 26.

Dr. Alexander J. Gillis and Miss Helen Costello, both of Baltimore, were married September 28.

Dr. Karl H. Van Norman, First Assistant Director of the Johns Hopkins Hospital, has resigned and will become Director of the new Miller Hospital at St. Paul.

(Continued on page 40)

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Director.

(Continued from page 38)

MISSISSIPPI

The United States Public Health Hospital, Biloxi, is now open and is caring for a number of patients. The capacity of the institution will be increased to care for 200 patients.

On October 8 the corner-stone of the new City Hospital, Brookhaven, was laid by the Masons.

Dr. Francis M. Sheppard has resigned as Superintendent of the State Charity Hospital, Jackson, and has been succeeded by Dr. David Walley.

Dr. S. Myers, Vicksburg, has been appointed County Physician.

At the semi-annual meeting of the Homochitto Valley Medical Society held at Natchez October 19, Dr. Thomas E. Hewitt, Liberty, was elected President; Drs. Marcus Beekman, Natchez, William R. Brumfield, Gloster, John W. Chisholm, Roxie, David S. Smith, Rodney, and J. W. Brandon, Jr., Woodville, Vice-Presidents; Dr. Jacob S. Ullman, Natchez, Secretary-Treasurer. The constitution was amended to hold a meeting in January, April, July and October instead of twice a year.

Deaths

Dr. John D. Kellis, Shuqualak, died October 7.

Dr. Robert E. Jones, Crystal Springs, aged 78, died October 25.

Dr. Charles F. Carnes, Kosciusko, aged 66, died October 18 at the Baptist Memorial Hospital, Memphis.

MISSOURI

The Sisters of St. Mary, St. Louis, are planning to erect a seven-story hospital at Richmond Heights at a cost of $1,000,000.

At the recent meeting of the Southwest Missouri Medical Society held in Springfield Dr. Otto C. Horst was elected President; Dr. A. C. Ames, Mountain Grove, Vice-President; all the other officers were re-elected as follows: Dr. Charles Orr, Ash Grove, Second Vice-President; Dr. Lee Cox, Springfield, Treasurer; Dr. Edwin F. James, Springfield, Recording Secretary; Dr. Joseph W. Love, Springfield, Corresponding Secretary.

At the meeting of the Medical Association of the Southwest, held in Kansas City in October, the following officers were elected: Dr. St. Cloud Cooper, Fort Smith, Ark., President; Dr. Fred H. Clark, Oklahoma City, Okla., re-elected Secretary-Treasurer. Next meeting to be held in Hot Springs, Ark., October, 1922.

The prize of $100 offered by the Jackson County Medical Association for the best paper read before the Society during the year has been awarded to Dr. Lysle M. Sellers, Kansas City. His paper was on "Vertigo."

The Director of Public Welfare, St. Louis, recently announced a plan for the expenditure of $1,000,000 for the establishment of the Koch Hospital.

The Glenwood Sanatorium, Webster Groves, announces the following reorganization of its medical staff: Drs. Frank R. Fry, Sidney I. Schwab and Malcolm A. Bliss, Visiting Consultants; Dr. Lewis D. Stevenson, Visiting Neurologist; Dr. Raleigh K. Andrews, Resident Physician.

Dr. Ethan E. Brunner has been elected Superintendent of the Farmington Hospital to succeed Dr. Jesse L. Eaton.

At the recent meeting of the Mid-Western Association of Anesthetists, in Kansas City, the following officers were elected: Dr. David E. Hoag, Pueblo, Colorado, President; Drs. B. W. Harms, Omaha, Neb., and Winnie M. Sanger, Oklahoma City, Okla., Vice-Presidents; Dr. Morris H. Clark, Kansas City, Secretary-Treasurer.

Dr. Moses H. Topping, Flat River, has been appointed Superintendent of the Colony for the Feeble-minded, Marshall.

Deaths

Dr. Henry C. Shutte, West Plains, aged 63, died October 12 in Chicago from carcinoma of the throat.

Dr. Albert Garfield Koch, Kansas City, aged 41, died suddenly October 23.

Dr. Joseph P. Isley, Polo, aged 44, died September 1.

Dr. William Advance Potter, St. Louis, aged 51, died September 22 at the Deaconess Hospital from pneumonia.

Dr. Bernice Barks Barr, Clinton, was recently accidentally killed in front of her office by an automobile.

NORTH CAROLINA

The North Carolina Tuberculosis Association met in conjunction with the National Tuberculosis Association at Greensboro October 6-7.

Since the closing of the hospital in Salisbury the Y. M. C. A. at Spencer has undertaken to equip its hospital rooms for emergency use.

The semi-annual meeting of the Eighth District Medical Society of North Carolina was held September 15 at Elkin.

The District Medical Society, composed of the counties of

(Continued on page 42)

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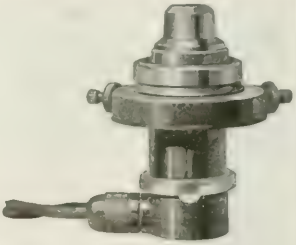

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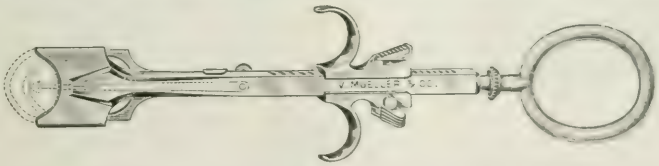

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(Continued from page 40)

Stanly, Union, Mecklenberg, Gaston and Lincoln, held a meeting in Concord October 10-11. The following officers were elected: Dr. Paul R. MacFayden, Concord, President; Dr. J. N. Anderson, Albemarle, Vice-President; Dr. Raymond Thompson, Vice-President.

The new home for nurses of the Wesley Long Hospital, Greensboro, has been formally opened.

Deaths

Dr. Frisby T. McKaig, Andrews, aged 56, died August 25.

Dr. L. P. Sorrell, Leasville, aged 72, died October 24 at the Rex Hospital, Raleigh.

OKLAHOMA

A home for the American Legion has recently been completed in Mangum and Dr. Frank H. McGregor has been elected to the post commandership of the Mangum American Legion.

Dr. Albert Helm, Oklahoma City, has been appointed Inspector in the State Health Department.

The new tuberculosis sanatorium, Clinton, for which an appropriation of $206,000 was made by the last Legislature, will be completed soon. The land, consisting of 160 acres, was donated to the State by citizens of Clinton.

Dr. A. R. Lewis, State Health Commissioner, Oklahoma City, has announced the resignations of J. C. Norman and J. L. Wood, both State Bacteriologists.

R. J. Tighe, Superintendent of Schools, Oklahoma City, has been elected to serve on the Executive Comm tee of the Oklahoma Public Health Association.

The Oklahoma Public Health Association met in Oklahoma City in October and elected the following officers: J. F. Owens, Oklahoma City, re-elected President; E. K. Gaylord, re-elected President Emeritus; Fred Struble, McAlester, Vice-President; Julius Chevitz, General Secretary; J. Henry Jolsom, Treasurer.

Dr. Walter Hardy, proprietor of the Hardy Sanatorium, Ardmore, has purchased a Wright aeroplane to be fitted up as an ambulance plane.

Deaths

Dr. William Tidball, Sentinel, aged 64, died September 22 from paralysis.

(Continued on page 44)

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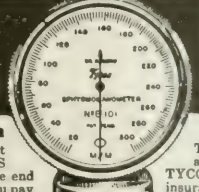

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(Continued from page 42)

SOUTH CAROLINA

The Lexington County Medical Society met October 3 and elected the following officers: Dr. J. P. Drafts, Leesville, President; Dr. K. L. Able, Batesburg, Vice-President; Dr. J. H. Mathias, Lexington, Secretary-Treasurer.

The Wallace Thompson Hospital, Union, recently built at a cost of $75,000, was opened in August.

Dr. Vance W. Brabham has resigned as Chairman of the Orangeburg City Board of Health.

A free diagnostic clinic was opened at the Baptist Hospital, Columbia, in September for the public of Columbia and South Carolina. Six rooms have been fitted up in the basement of the Hospital with the use of the laboratory and roentgen-ray room.

Deaths

Dr. Robert J. Talbert, McCormick, aged 68, died October 5 after a short illness.

TENNESSEE

The East Tennessee Medical Society met in Knoxville October 14 and elected the following officers: Dr. W. H. Taylor, New Market, President; Dr. L. M. Scott, Jellico, Vice-President for upper east Tennessee; Dr. J. R. Nankivell, Athens, Vice-President for lower east Tennessee; Dr. G. Victor Williams, Chattanooga, Secretary-Treasurer. The spring meeting will be held at Jellico and the next fall meeting at Chattanooga.

Dr. Octavus Dulaney, formerly with Baird-Dulaney Hospital, Dyersburg, announces that he has located in Louisville, Ky., and that his practice will be limited to ear, nose and throat. Offices to be in the Starks Building.

Dr. Paul H. Dietrich, formerly Superintendent of the Red Bank Sanatorium, Thorofare, N. J., has been appointed Superintendent of the George W. Hubbard Hospital, Nashville.

Dr. Murray W. Davis has been made Resident Physician of the City Hospital, Nashville.

At the recent meeting of the thirty-seventh annual convention of the Tri-State Medical Association, held in Memphis, the following officers were elected: Dr. Enoch R. McLean, Cleveland, Miss., President; Dr. J. Harvey McNeil, Olive Branch, Miss., Vice-President for Mississippi; Dr. C. M. Harwell, Osceola, Vice-President for Arkansas; Dr. L.

(Continued on page 46)

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The members of this Board, while not directly concerned with the routine of the individual laboratories, will, however, specify the methods to be used and keep the laboratories in touch with the most modern advances that will be useful in aiding the practicing physician. And they may be called upon to interpret results when any doubt arises.

Problems relating to the application of laboratory service to clinical medicine will be referred to Dr. Dock; Dr. Folin's advice will be followed in problems of blood chemistry and other biochemical subjects; questions relating to tissue diagnosis, bacteriological and serological methods will be referred to Dr. Hektoen.

Ethical questions will be referred to all members of the Board, and upon them will determine the policies of the various laboratories.

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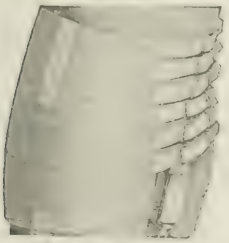

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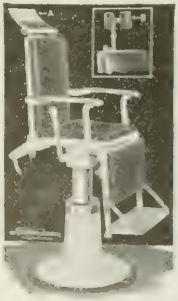

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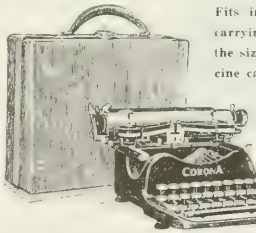

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(Continued from page 44)

J. Lindsey, Covington, Vice-President for Tennessee; Dr. A. F. Cooper, Memphis, Secretary, and Dr. J. F. Vaughan, Memphis, Treasurer.

Deaths

Dr. Elijah Alvis Davidson, Richmond, aged 76, died October 12 from chronic nephritis.

Dr. John F. Graves, Juno, aged 41, died suddenly October 7 from cerebral hemorrhage.

Dr. W. N. Wilkerson, Memphis, aged 93, died November 5.

Dr. Thomas J. Potter, Smithville, aged 60, died October 23 following a stroke of apoplexy.

Dr. James C. Palmer, Rogersville, aged 67, died recently after an illness of a few days.

Dr. Flavel B. Sloan, aged 77, died recently following a stroke of paralysis.

TEXAS

A public health institute will be conducted at Dallas under the auspices of the U. S. Public Health Service, Texas State Board of Health and the American Public Health Association, January 6-16.

Funds for a new hospital at New Braunfels have been raised. Construction will start immediately.

The Health Officer of Houston and the Director of the Social Service Bureau have outlined plans for the establishment of a mental hygiene clinic to devote special attention to abnormal children and to be operated in connection with the Health Department.

A site has been purchased for the new Harris Memorial Methodist Hospital, Fort Worth, which will cost about $1,000,000 and will contain 400 rooms, besides the large number of wards.

Dr. Richard L. Cooke, U. S. Public Health Service, formerly stationed at Washington, D. C., has been sent to Houston to take charge of health work at Camp Logan.

The newly completed hospital at the Confederate Home, Austin, was recently dedicated.

Dr. W. F. Alexander, City Health Officer at Terrell, has resigned.

The South Texas District Medical Association held a business meeting in Galveston October 14 and elected the following officers: Dr. F. R. Winn, Alvin, President; Dr. W. S. Foote, Bay City, Vice-President; Dr. J. E. Clarke, Hous-

(Continued on page 48)

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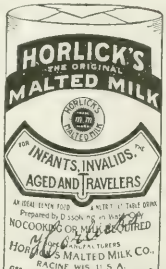

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(Continued from page 46)

ton, Secretary. Beaumont was selected as the next meeting place, the meeting to be held in March.

Dr. J. D. Blevins has resigned as Director of the Bureau of Communicable Diseases of the State Health Department.

The new nurses' home at the Central Texas Baptist Sanitarium, Waco, to cost approximately $75,000, will be of fireproof construction.

The I. & G. N. Railway Employees' Hospital Association are planning to build a hospital at Palestine to cost approximately $105,000.

Dr. Arthur Raymond Gaines, Captain, M.C., U. S. Army, Fort Sam Houston, and Miss Eleanor Hearne Knight were married at San Antonio September 21.

The Northwestern District Medical Society met in Mineral Wells October 12 and elected the following officers: Dr. A. D. Patillo, Wichita Falls, President; Dr. C. O. Terrell, Ranger, Vice-President; Dr. Austin F. Leach, Weatherford, re-elected Secretary-Treasurer.

Deaths

Dr. John T. Sparkman, Alvord, aged 58, died September 4.

VIRGINIA

At the recent meeting of the Medical Society of Virginia held in Lynchburg, the following officers were elected: Dr. E. C. S. Taliaferro, Norfolk, President; Drs. John Staige Davis, University of Virginia, C. P. Jones, Newport News, J. B. Deshazo, Ridgeway, Vice-Presidents; G. H. Winfrey, Richmond, Secretary-Treasurer.

Dr. A. M. D. McCormick, Berryville, has been given a Rear Admiral's commission in the Navy.

Dr. Allen Fiske Voshell, former resident orthopedist at Johns Hopkins Hospital, Baltimore, has assumed charge of the Department of Orthopedic Surgery at the University of Virginia Medical School and Hospital.

Dr. F. A. Ward announces that he has opened an office for the practice of diseases and surgery of the eye, ear, nose and throat, American Bank and Trust Building, Suffolk, Va.

The corner-stone of the Marshall Lodge Memorial Hospital, Lynchburg, has been laid and the building is being erected at a cost of approximately $250,000.

The Association of Surgeons of the Chesapeake & Ohio Railroad, at their annual meeting in Richmond, elected the following officers: Dr. J. M. Salmon, Ashland, Ky., President; Drs. S. W. Hobson, Newport, W. R. Griess, Cincinnati, Ohio, and A. Murat Willis, Richmond, Vice-Presidents; G. E. Meanley, Richmond, Secretary-Treasurer (re-elected).

The Fairfax County Medical Society has elected the following officers: Dr. B. H. Swain, Ballston, President; Drs. Tom A. Williams, Washington, D. C., and C. A. Ransom, East Falls Church, Vice-Presidents; Corresponding Secretary, Dr. O. H. Coumbe, Washington, D. C.; Dr. Wm. P. Caton, Fairfax, Recording Secretary; Dr. F. M. Brooks, Sweetnam, Treasurer.

The Buckingham County Medical Society has elected the following officers: Dr. Jos. H. Mitchell, Dillwyn, President; Dr. John Randolph, Arvonia, Secretary.

The Loudon County Medical Society held its regular meeting September 8 in Leesburg and elected the following officers: Dr. G. F. Simpson, Hamilton, President; Dr. Samuel L. Steer, Waterford, Secretary.

The Roanoke Academy of Medicine has elected the following officers: Dr. T. Allen Kirk, President; Drs. A. P. Jones and J. D. Willis, Vice-Presidents; Dr. Claude Moore, Secretary-Treasurer.

The Southside Virginia Medical Association held its regu-

(Continued on page 50)

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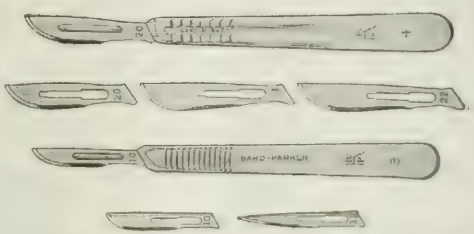

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(Continued from page 48)

lar quarterly meeting in Victoria September 13.

The Walter Reed Medical Society of Virginia was held in Newport News September 14-15. The officers are Dr. H. A. Tabb, Gloucester, President; Drs. J. W. D. Haynes, Mathews, Brown Evans, Saluda, H. D. Howe, Hampton, Rea Parker, Smithfield, and W. W. Kerns, Bloxom, Vice-Presidents; Dr. L. E. Stubbs, Newport News, Secretary-Treasurer.

Deaths

Dr. William A. Strother, Boonsboro, aged 37, died September 24.

Dr. Henry H. Levy, Richmond, aged 71, died October 20 at the Stuart Circle Hospital after an illness of two years following fracture of the femur.

Dr. William Edward McGuire, Richmond, aged 61, died October 7 from heart disease.

Dr. William R. Stover, Bristol, aged 45, died September 14 from myocarditis.

WEST VIRGINIA

Two new buildings will be constructed at the Tuberculosis Sanatorium, Hopemount. The addition will provide accommodation for 100 more beds, bringing the total up to 300.

Dr. Frank C. Hodges and Miss Aline S. Adams, both of Huntington, were married September 14.

Deaths

Dr. Myron M. Reppard, Middlebourne, aged 54, died October 5 from injuries received when his automobile ran over him.

Dr. Meigs Jackson Bartlett, Clarksburg, aged 61, died October 11 from blood poisoning.

Dr. Oscar W. Shreve, Holden, aged 57, died October 22.

Dr. Gustav Adolphus Aschman, Wheeling, aged 61, died October 2 from chronic nephritis and uremia following an operation.

Dr. Melvin B. Squires, Flatwoods, aged 53, was killed September 26 in a railway accident.

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